

APPENDIX O

LOCAL MOBILITY ANALYSIS
CHULA VISTA NIRVANA
Chula Vista, California
January 12, 2023

LLG Ref. 3-21-3405

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EXECUTIVE SUMMARY

The Nirvana Business Park is an industrial complex consisting of three two-story buildings and one three-story storage facility totaling 299,218 square feet on 13.31 acres, located at 821 Main Street in the City of Chula Vista.

The project site is identified as Tax Assessor parcel numbers – APN 644-050-13, 14 and a portion of 644-050-80. The project would construct four buildings as follows:

- Building 1 – a 60,430 square-foot warehouse with office and mezzanine
- Building 2 – a 48,658 square-foot warehouse with office and mezzanine
- Building 3 – a 140,802 square-foot, 3-story self-storage building
- Building 4 – a 49,328 warehouse with office and mezzanine

The site is General Plan designated IL – Limited Industrial and Zoned (ILP) Limited Industrial. The proposed light industrial uses include primarily warehouse and manufacturing, assembly, storage, and warehouse distribution. The self-storage facility will feature interior and exterior accessible storage spaces, with surface loading and elevators for upper floors.

Hours of operation for the business park are planned to be Monday through Friday 6:00 a.m. to 6:00 p.m. and Saturday 6:00 a.m. to noon. The self-storage facilities will have 24/7 access.

VMT ANALYSIS

The Project is located in a VMT efficient area (at or below the base year average VMT/employee) based on the applicable location-based screening map produced by SANDAG. The baseline average regional VMT/employee is 18.9 per the SANDAG Series 14 (Year 2016) ABM2+ data.

Using the SANDAG screening map for industrial projects under per employee measurements, the Project would be expected to generate 16.43 VMT/employee. Hence, the Project would not require a VMT analysis and the Project is presumed to have a less than significant VMT impact.

PROJECT TRIP GENERATION AND DISTRIBUTION

The proposed Project is calculated to generate 1,549 daily trips with 156 AM peak hour trips (134 inbound / 22 outbound) and 177 PM peak hour trips (43 inbound / 134 outbound).

The Project traffic was distributed along Main Street based on the site location, access to the I-805, existing traffic patterns in the area, a review of trip distribution of similar land uses in the vicinity and anticipated traffic patterns to and from the site.

TRAFFIC LEVEL OF SERVICE (LOS) ANALYSIS

The study area intersections are calculated to continue to operate acceptably at LOS D or better during the AM and PM peak hours under all scenarios. Based on the established criteria, no substantial effects are calculated in terms of intersection capacity for the project. Therefore, improvements are not required under these analyses.

QUEUE AND SIGHT DISTANCE ANALYSIS

The Project's access would be via an unsignalized driveway from Nirvana Avenue from an existing easement. The driveway will be approximately 28 feet wide and serve as full access. The driveway will be fronting a two-lane undivided roadway that primarily serves business along Nirvana Avenue and Energy Way.

Based on Synchro simulation, under Existing + Project conditions, the 95th percentile eastbound left-turn queue at the Main Street / Nirvana Avenue intersection is calculated to be 173' or less (approximately 7 vehicles, assuming an average car length of 25') during the AM and PM peak hours. Therefore, the existing storage of 220 feet is expected to be able to accommodate the eastbound left-turn queue. Also, based on our field observations, sight distance requirements are met for both eastbound and westbound approaches.

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- C. Intersection Methodology and City of Chula Vista Transportation Study Guidelines synchro parameter specifications
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LOCAL MOBILITY ANALYSIS

CHULA VISTA NIRVANA

Chula Vista, California

January 12, 2023

1.0 INTRODUCTION

Linscott, Law and Greenspan, Engineers (LLG) has prepared this Local Mobility Analysis to assess the impacts to the street system as a result of the proposed Chula Vista Nirvana Project. The Project proposes to develop approximately 158,416 SF of warehousing facility and 140,802 SF of storage building on the north side of Main Street and east of Nirvana Avenue in the City of Chula Vista.

The traffic analysis presented in this report includes the following:

- Project Description
- Existing Conditions
- CEQA Vehicle Miles Traveled (VMT) Assessment
- Local Mobility Analysis Approach and Methodology
- Substantial Effect Criteria
- Analysis of Existing Conditions
- Trip Generation/Distribution/Assignment
- Analysis of Existing + Project Scenario
- Access Assessment
- Active Transportation Discussion
- Conclusions

2.0 PROJECT DESCRIPTION

The Nirvana Business Park is an industrial complex consisting of three two-story buildings and one three-story storage facility totaling 299,218 square feet on 13.31 acres, located at 821 Main Street in the City of Chula Vista. Site access is proposed via one unsignalized driveway from Nirvana Avenue from an existing easement.

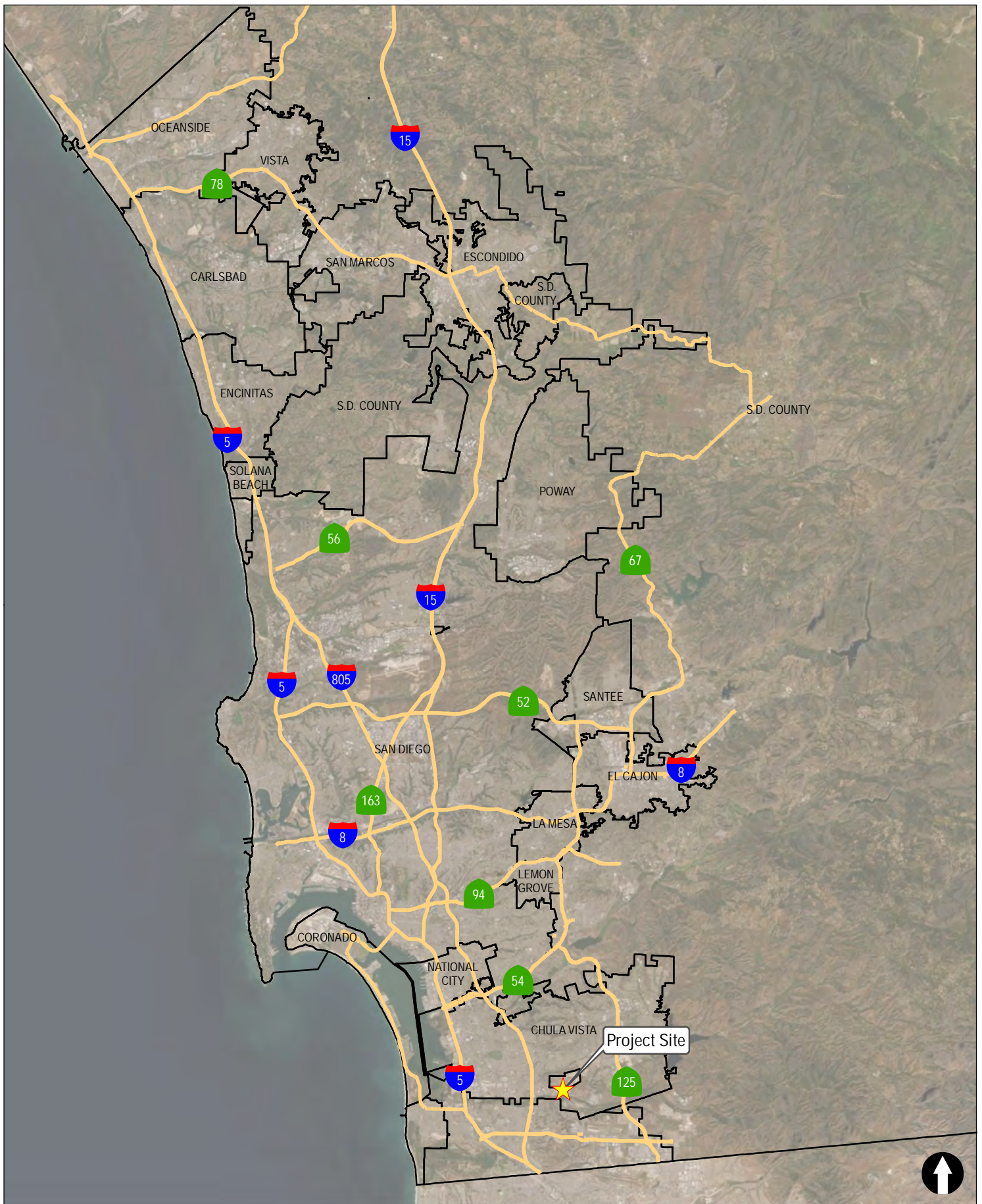
The project site is identified as Tax Assessor parcel numbers – APN 644-050-13, 14 and a portion of 644-050-80. The project would construct four buildings as follows:

- Building 1 – a 60,430 square-foot warehouse with office and mezzanine
- Building 2 – a 48,658 square-foot warehouse with office and mezzanine
- Building 3 – a 140,802 square-foot, 3-story self-storage building
- Building 4 – a 49,328 warehouse with office and mezzanine

The site is General Plan designated IL – Limited Industrial and Zoned (ILP) Limited Industrial. The proposed light industrial uses include primarily warehouse and manufacturing, assembly, storage, and warehouse distribution. The self-storage facility will feature interior and exterior accessible storage spaces, with surface loading and elevators for upper floors.

Hours of operation for the business park are planned to be Monday through Friday 6:00 a.m. to 6:00 p.m. and Saturday 6:00 a.m. to noon. The self-storage facilities will have 24/7 access.

Figure 2–1 shows the Project vicinity and **Figure 2–2** illustrates, in more detail, the site location. **Figure 2–3** shows the Project site plan.



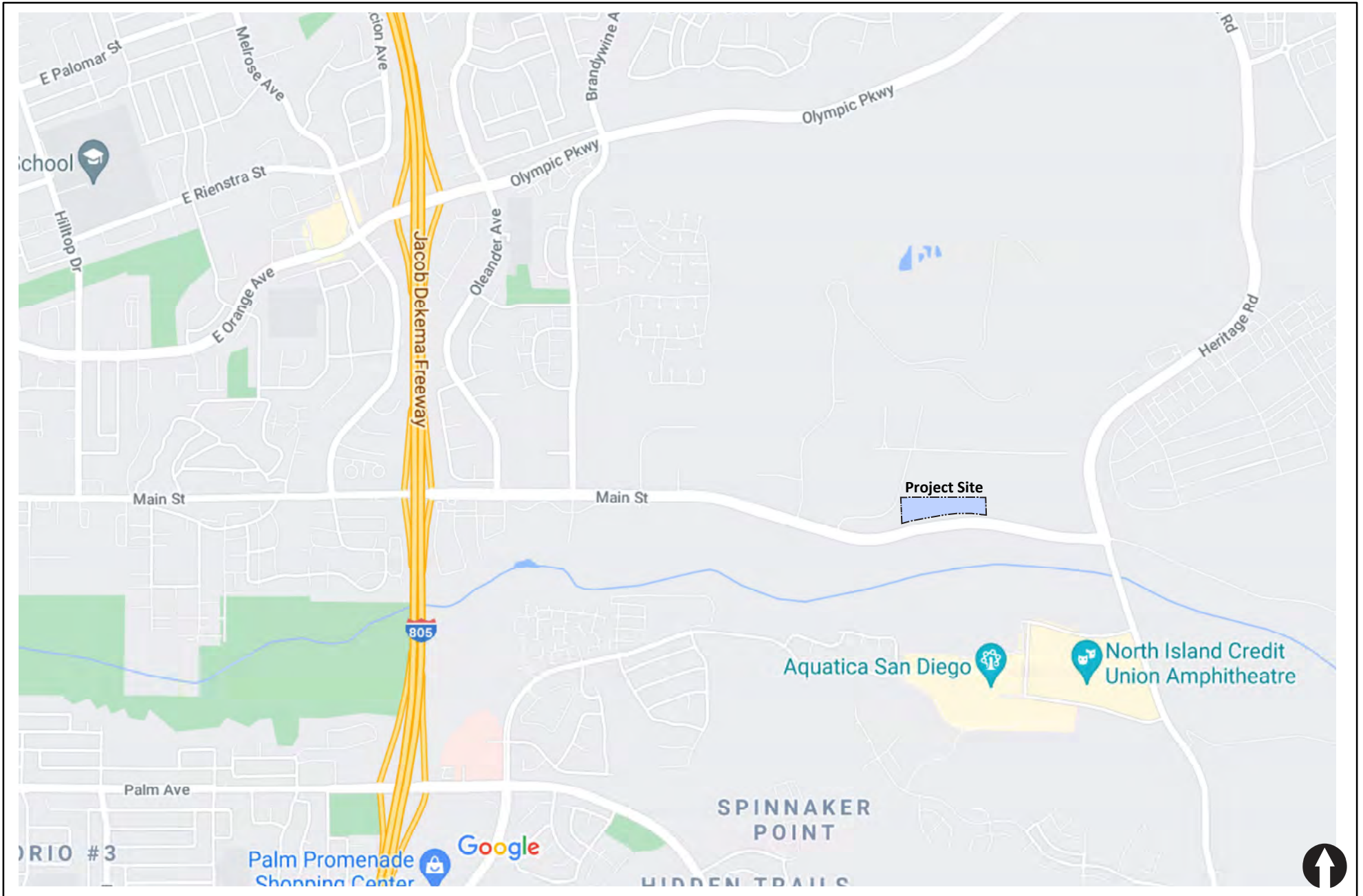
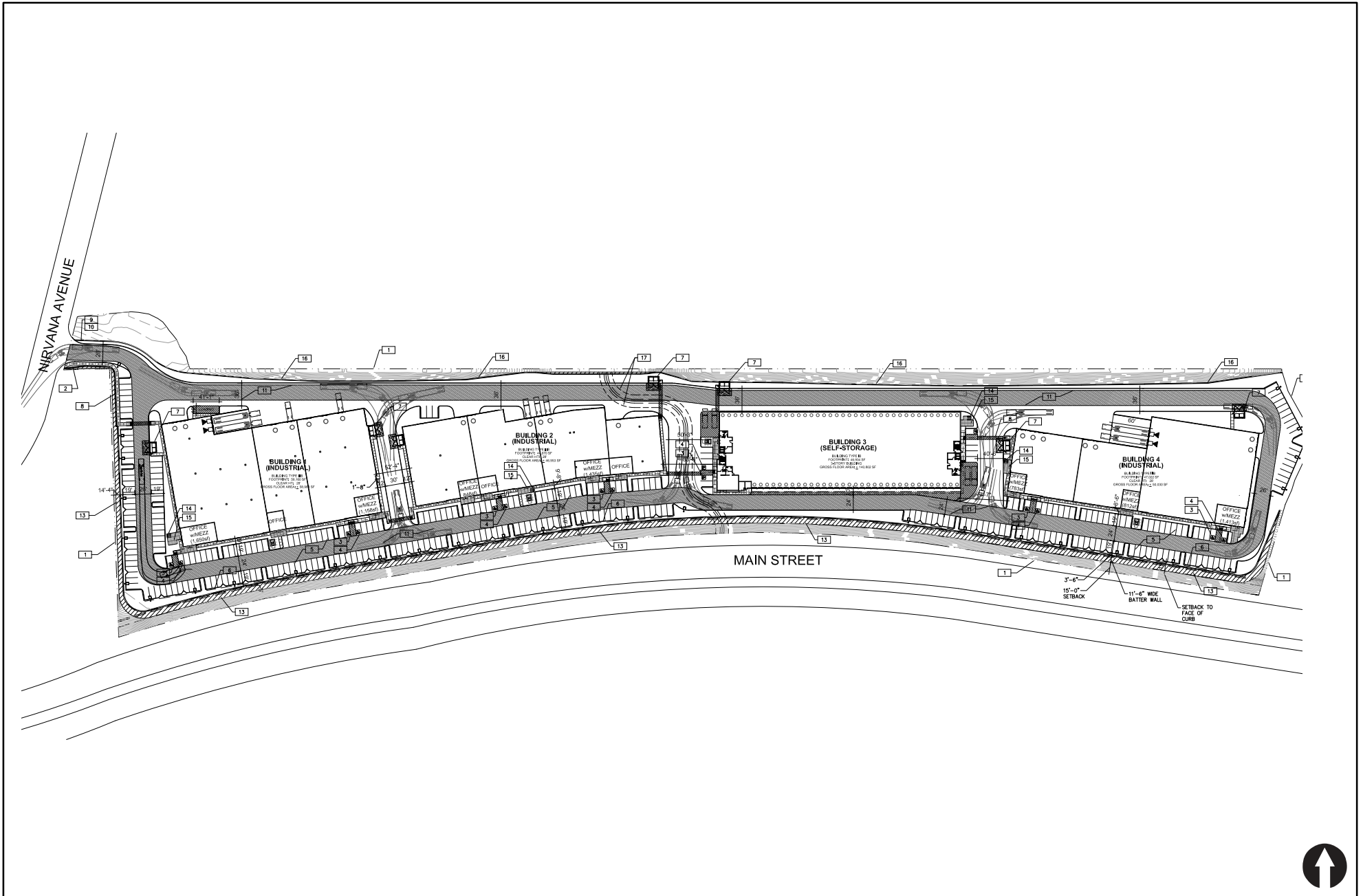


Figure 2-2

Project Area Map

CHULA VISTA SELF STORAGE



3.0 EXISTING CONDITIONS

Effective evaluation of the traffic impacts associated with the proposed Chula Vista Nirvana requires an understanding of the existing transportation system within the project area. *Figure 3-1* shows an existing conditions diagram, including signalized intersections and lane configurations.

The study area includes the following intersections:

1. Main Street / Brandywine Avenue
2. Main Street / Auto Park Place
3. Main Street / Auto Park Avenue
4. Main Street / Maxwell Road
5. Main Street / Nirvana Avenue
6. Nirvana Avenue / Project Driveway

3.1 Existing Transportation Conditions

The following is a description of the existing street network in the study area.

Main Street is classified as a 6 Lane Prime in the *City of Chula Vista General Plan Land Use and Transportation Element*. It is currently constructed as a six-lane divided roadway from west of Brandywine Avenue to east of Auto Park Avenue. From approximately 800 feet west of Maxwell Road to east of Nirvana Avenue, Main Street is built as a five-lane divided roadway (three westbound lanes and two eastbound lanes). Sidewalks are provided on both sides of the roadway. Class II bike lanes are provided on both sides of the roadway. Curbside parking is not permitted. The posted speed limit west of Brandywine Avenue is 45 mph and 50 mph east of Brandywine Avenue. In addition, it should be noted that Main Street serves as the primary access to the North Island Credit Union Amphitheater, which hosts many events throughout the year. Project traffic will mix with event traffic at times. However, the majority of these events are held in the evening and on weekends outside of peak Project commuter times.

Brandywine Avenue is classified as a Class I Collector in the *City of Chula Vista General Plan Land Use and Transportation Element*. It is currently constructed as a four-lane undivided roadway with a two-way left-turn lane north of Main Street. Sidewalks are provided on both sides of the roadway. Class II bike lanes are provided on both sides of the roadway. Curbside parking is permitted on both sides of the roadway between Olympic Boulevard and Mendocino Drive. The posted speed limit is 35 mph.

Auto Park Place is a non-classified roadway in the *City of Chula Vista General Plan Land Use and Transportation Element*. It is currently constructed as a two-lane undivided roadway with a two-way left-turn lane. Sidewalks are provided on both sides of the roadway. Bike lanes are not provided on either side of the roadway. Curbside parking is permitted on both sides of the roadway. There is no posted speed limit.

Auto Park Avenue is a non-classified roadway in the *City of Chula Vista General Plan Land Use and Transportation Element*. It is currently constructed as a two-lane undivided roadway. Sidewalks are provided on both sides of the roadway. Bike lanes are not provided on either side of the roadway. Curbside parking is permitted on both sides of the roadway. There is no posted speed limit.

Maxwell Road is a non-classified roadway in the *City of Chula Vista General Plan Land Use and Transportation Element*. It is currently constructed as a three-lane undivided roadway with intermittent turning lanes north of Main Street. Sidewalks are provided on both sides of the roadway. Bike lanes are not provided. Curbside parking is not permitted. The posted speed limit is 35 mph.

Nirvana Avenue is a non-classified roadway in the *City of Chula Vista General Plan Land Use and Transportation Element*. It is currently constructed as a two-lane undivided roadway. Sidewalks are provided on both sides of the roadway. Bike lanes are not provided. Curbside parking is permitted on both sides of the roadway. The posted speed limit is 25 mph.

3.2 Existing Traffic Volumes

Peak hour intersection turning movement volume counts were conducted at the study area intersections, on Thursday, February 27, 2020. These counts were obtained from a City of Chula Vista Senior Civil Engineer staff in the Engineering and Capital Projects Department. No adjustments were made as counts were conducted pre-Covid and while schools were in session.

Figure 3–2 shows the Existing traffic volumes and **Appendix A** contains the Existing Count Sheets.

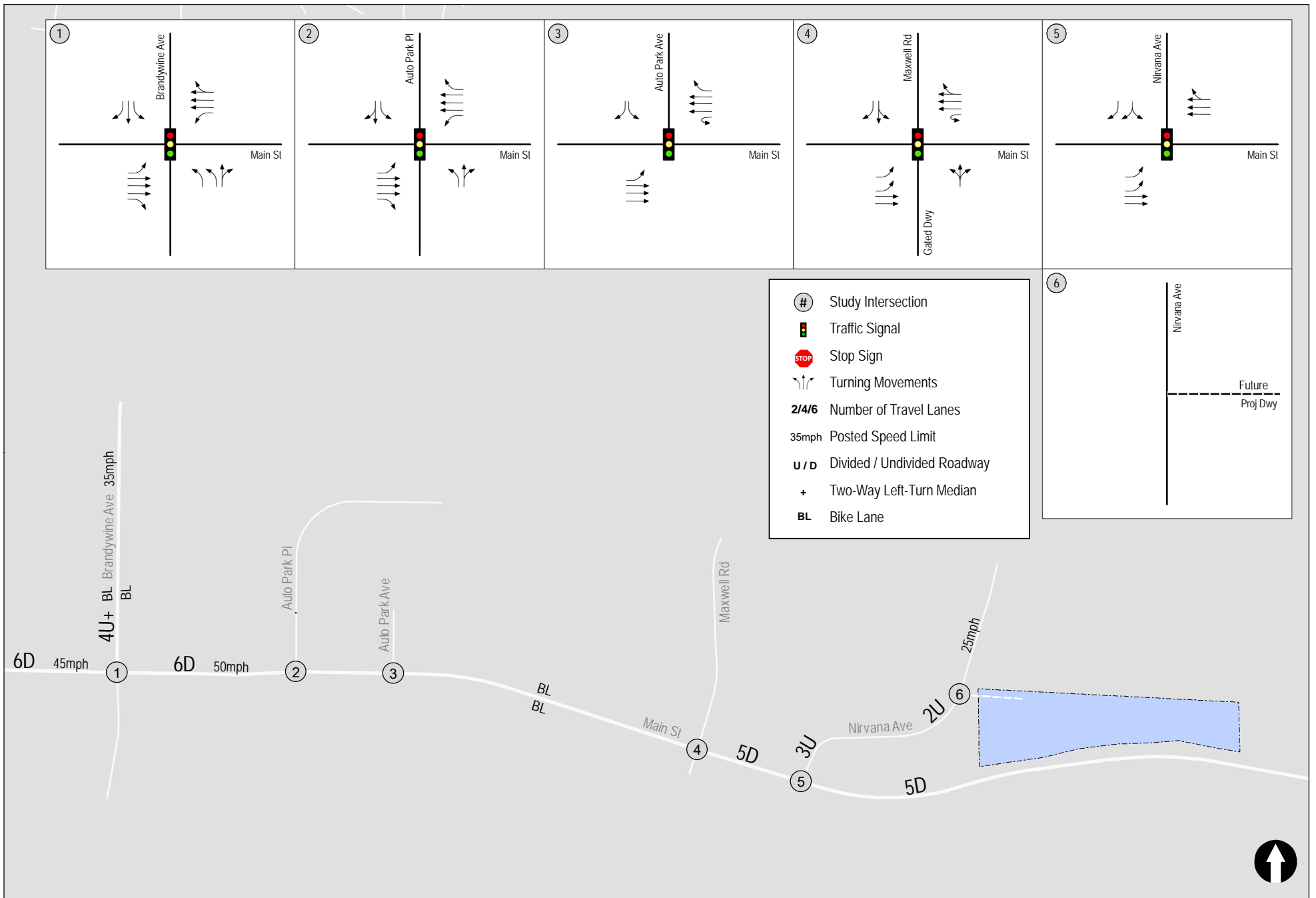


Figure 3-1
Existing Conditions Diagram

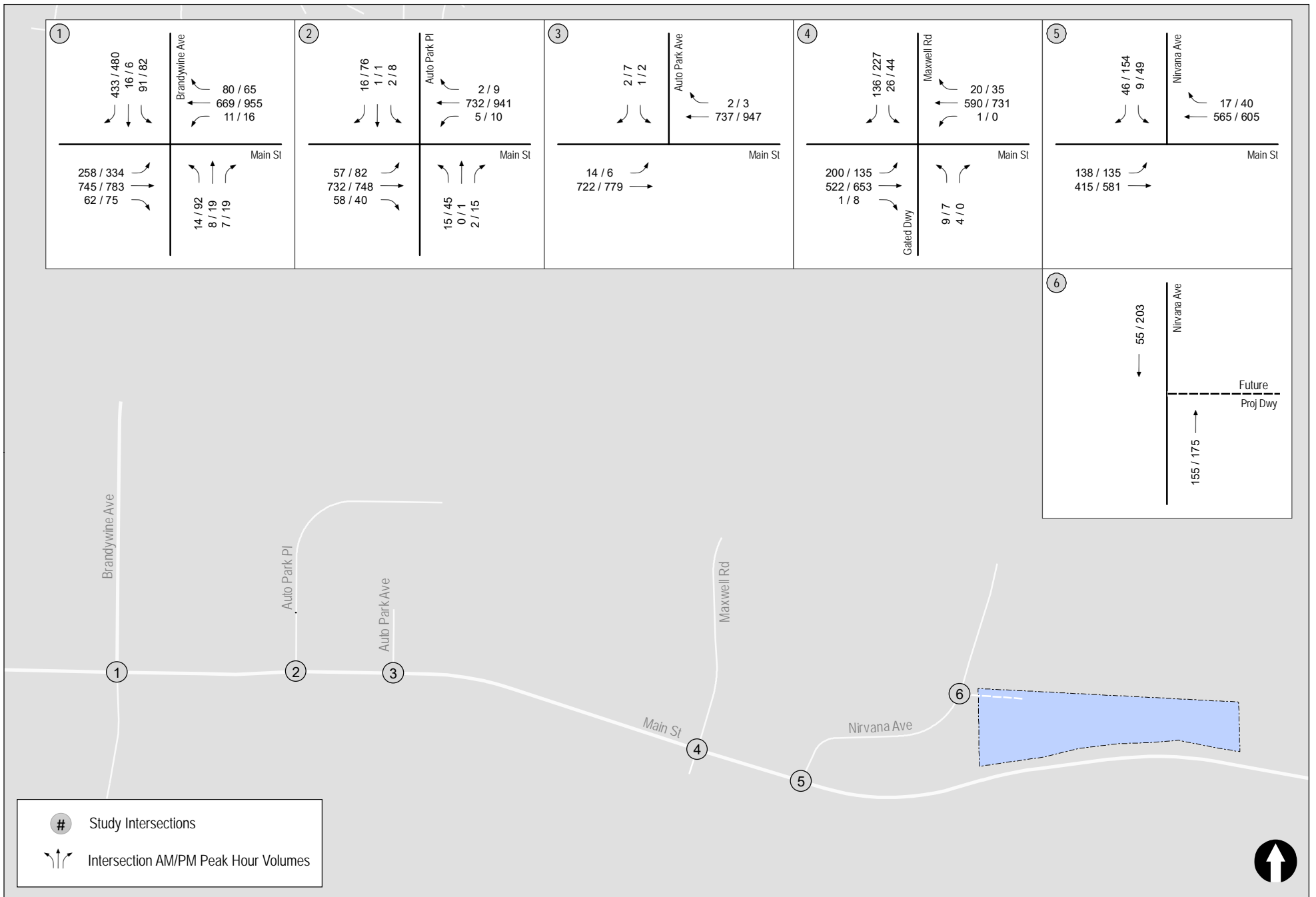


Figure 3-2
Existing Traffic Volumes

Chula Vista Self Storage

4.0 VEHICLES MILES TRAVELED (VMT) ASSESSMENT

An assessment was conducted to determine the impacts on Vehicle Miles Traveled (VMT) for the Project. This assessment utilizes methodologies presented within the Governor’s Office of Planning and Research (OPR) Technical Advisory developed to assist with implementation of Senate Bill 743 (SB 743), which resulted in a shift in the measure of effectiveness for determining transportation impacts from Level of Service (LOS) and vehicular delay to VMT. VMT analyses are required for use in all California Environmental Quality Act (CEQA) documents no later than July 1, 2020. Also, in reference to CEQA Guidelines Proposed Section 15064.3, the OPR states that “‘vehicle miles traveled’ refers to the amount of distance of **AUTOMOBILE** travel attributable to a project. Here, the term ‘automobile’ refers to on-road passenger vehicles, specifically cars and light trucks.” Therefore, heavy vehicles are not considered.

Per the *City of Chula Vista Transportation Study Guidelines*:

“Industrial Employment projects located within a VMT-efficient area may be presumed to have a less than significant impact absent substantial evidence to the contrary. A VMT-efficient area for industrial employment projects is any area with an average VMT/Employee at or below the baseline regional average for the census tract it is located within.”

Significance Threshold

A SANDAG VMT calculation tool was used instead of the SANDAG regional travel demand model. The Project is located in a VMT efficient area (at or below the base year average VMT/employee) based on the applicable location-based screening map produced by SANDAG. The baseline average regional VMT/employee is 18.9 per the SANDAG Series 14 (Year 2016) ABM2+ data.

Project VMT

Using the SANDAG screening map for industrial projects under per employee measurements, the Project would be expected to generate 16.43 VMT/employee. Hence, the Project would not require a VMT analysis and the Project is presumed to have a less than significant VMT impact. **Table 4-1** shows the VMT analysis results. **Appendix B** includes the two SANDAG screening maps.

**TABLE 4-1
PROJECT VEHICLE MILES TRAVELED ANALYSIS**

VMT per Employee		
Geography	VMT per Employee	Exceeds Threshold?
San Diego Region	18.9	–
<i>Significance Threshold for Industrial Employment (at Regional Average VMT)</i>	18.9	–
Project Site		
Chula Vista Nirvana	16.43	No

Source: SANDAG VMT Employee Screening Tool for the City of Chula Vista

5.0 LOCAL MOBILITY ANALYSIS APPROACH AND METHODOLOGY

5.1 Analysis Approach

This traffic analysis assesses the study area intersections for the Existing and Existing + Project scenarios to determine the potential impacts to the road network. The Project's expected Opening Year is approximately end of 2023/beginning of 2024. Based on the City of Chula Vista Transportation Study Guidelines, "if the proposed project's opening year is within 2 years of the project's application, the Existing + Project scenario is considered to be the same as the project's Opening Year + Project scenario."

5.2 Analysis Methodology

LOS is the term used to denote the different operating conditions which occur on a given roadway segment under various traffic volume loads. It is a qualitative measure used to describe a quantitative analysis taking into account factors such as roadway geometries, signal phasing, speed, travel delay, freedom to maneuver, and safety. LOS provides an index to the operational qualities of a roadway segment or an intersection. LOS designations range from A to F, with LOS A representing the best operating conditions and LOS F representing the worst operating conditions. LOS designation is reported differently for signalized and unsignalized intersections.

Signalized intersections were analyzed under AM and PM peak hour conditions. Average vehicle delay was determined utilizing the methodology found in Chapter 18 of the *Highway Capacity Manual (HCM) 6th Edition*, with the assistance of the *Synchro* (version 10) computer software. The delay values (represented in seconds) were qualified with a corresponding intersection Level of Service (LOS). Signalized intersection calculation worksheets and a more detailed explanation of the methodology are attached in *Appendix C*.

Unsignalized intersections were analyzed under AM and PM peak hour conditions. Average vehicle delay and Levels of Service (LOS) was determined based upon the procedures found in Chapters 19 and 20 of the *Highway Capacity Manual (HCM) 6th Edition*, with the assistance of the *Synchro* (version 10) computer software. Unsignalized intersection calculation worksheets and a more detailed explanation of the methodology are attached in *Appendix C*.

In addition, parameters specified in Appendix G of the City of Chula Vista Transportation Study Guidelines were incorporated in the *Synchro* files. These parameters are included in *Appendix C*.

5.3 Pedestrian Mobility

The Project's pedestrian network connectivity was evaluated by reviewing the existing pedestrian network as discussed in *Section 11.0*.

5.4 Bicycle Mobility

The Project's bicycle network connectivity was evaluated by reviewing the existing bicycle network as discussed in *Section 11.0*.

5.5 Transit Mobility

The Transit Mobility review included the existing transit network, existing routes and headways of the MTS buses with stops in the Project study area as discussed in *Section 11.0*.

6.0 SUBSTANTIAL EFFECT CRITERIA

Project specific traffic effects are those effects for which the addition of project trips result in an identifiable degradation in LOS on intersections, triggering the need for specific project-related improvement strategies.

Table 6-1 shows the criteria for determining whether the Project results in project specific traffic effects on intersections in the City of Chula Vista.

**TABLE 6-1
THRESHOLD FOR DETERMINING A PROJECT'S SUBSTANTIAL TRAFFIC EFFECT**

Facility	Facility Type	Substantial Traffic Effect
Signal	Whole Intersection	<ul style="list-style-type: none"> Proposed project contributes to an intersection that currently operates or is projected to operate at LOS E or below. Proposed project causes an intersection's operations to degrade to LOS E or below.
	Turning Movement	Proposed project traffic either contributes to or is responsible for the 95th percentile queue length exceeding available storage length.
Freeway Interchange	Freeway Off-Ramp	Proposed project traffic either contributes to or is responsible for the 95th percentile queue length exceeding available off-ramp storage length and extending onto the freeway mainline.
All-way Stop Control	Whole Intersection	<ul style="list-style-type: none"> Proposed project contributes to an intersection that currently operates, or is projected to operate, at LOS E or below. Proposed project causes the intersection's operations to LOS E or below during one or more peak hours.
Side-Street Stop Control	Critical movement	<ul style="list-style-type: none"> Proposed project contributes to a critical movement of an intersection that currently operates, or is projected to operate, at LOS E or below. Proposed project causes the intersections critical movement to degrade to LOS E or below.
Pedestrian		All facilities within a project study area
Bicycle		All facilities within a project study area
Transit		All facilities within a project study area

General Notes:

- Information obtained from *Table 3* of the City of Chula Vista Transportation Study Guidelines (updated January 2022).

7.0 ANALYSIS OF EXISTING CONDITIONS

Table 7-1 summarizes the existing peak hour intersection operations. City-provided signal timing plans were used as the basis of the analysis. As shown in *Table 7-1*, all the study area intersections are calculated to currently operate at LOS D or better during both the AM and PM peak hours.

Appendix D contains the Existing intersection analysis worksheets.

TABLE 7-1
EXISTING INTERSECTION OPERATIONS

Intersection	Control Type	Peak Hour	Existing	
			Delay ^a	LOS ^b
1. Main Street / Brandywine Avenue	Signal	AM	43.4	D
		PM	50.1	D
2. Main Street / Auto Park Place	Signal	AM	3.6	A
		PM	18.7	B
3. Main Street / Auto Park Avenue	Signal	AM	1.9	A
		PM	1.7	A
4. Main Street / Maxwell Road	Signal	AM	24.6	C
		PM	30.9	C
5. Main Street / Nirvana Avenue	Signal	AM	9.4	A
		PM	12.8	B
6. Nirvana Avenue / Project Driveway	MSSC ^c	AM	DNE	DNE
		PM	DNE	DNE

Footnotes:

- a. Average delay expressed in seconds per vehicle.
- b. Level of Service.
- c. MSSC – Minor Street Stop Controlled intersection. Worst-case movement approach delay and LOS reported.

General Notes:

- 1. DNE – does not exist.

SIGNALIZED		UNSIGNALIZED	
DELAY/LOS THRESHOLDS		DELAY/LOS THRESHOLDS	
Delay	LOS	Delay	LOS
0.0 ≤ 10.0	A	0.0 ≤ 10.0	A
10.1 to 20.0	B	10.1 to 15.0	B
20.1 to 35.0	C	15.1 to 25.0	C
35.1 to 55.0	D	25.1 to 35.0	D
55.1 to 80.0	E	35.1 to 50.0	E
≥ 80.1	F	≥ 50.1	F

8.0 TRIP GENERATION/DISTRIBUTION/ASSIGNMENT

8.1 Trip Generation

The Project proposes to develop approximately 158,416 SF of warehousing facility and 140,802 SF of storage building. **Table 8-1** summarizes the Project trip generation calculations. As shown in **Table 8-1**, the proposed Project is calculated to generate 1,549 daily trips with 156 AM peak hour trips (134 inbound / 22 outbound) and 177 PM peak hour trips (43 inbound / 134 outbound).

8.2 Trip Distribution/Assignment

The Project traffic was distributed along Main Street based on the site location, access to the I-805, existing traffic patterns in the area, a review of trip distribution of similar land uses in the vicinity and anticipated traffic patterns to and from the site.

Figure 8-1 shows the Project traffic distribution. **Figure 8-2** shows the Project traffic volumes.

**TABLE 8-1
PROJECT TRIP GENERATION**

Land Use	Size	Daily Trip Ends (ADTs)		AM Peak Hour					PM Peak Hour				
		Rate ^a	Volume	% of ADT ^a	In:Out Split	Volume			% of ADT ^a	In:Out Split	Volume		
						In	Out	Total			In	Out	Total
Industrial Park (no commercial)	158,416 SF	8 /KSF ^b	1,267	11%	90 : 10	125	14	139	12%	20 : 80	30	122	152
Storage Building	140,802 SF	2 /KSF ^c	282	6%	50 : 50	9	8	17	9%	50 : 50	13	12	25
Total			1,549			134	22	156			43	134	177

Footnotes:

- a. Rates are based on SANDAG's *(Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region*, April 2002.
- b. Rates are based on industrial park (no commercial) rate of 8/1,000 SF.
- c. Rates are based on storage rate of 2/1,000 SF.

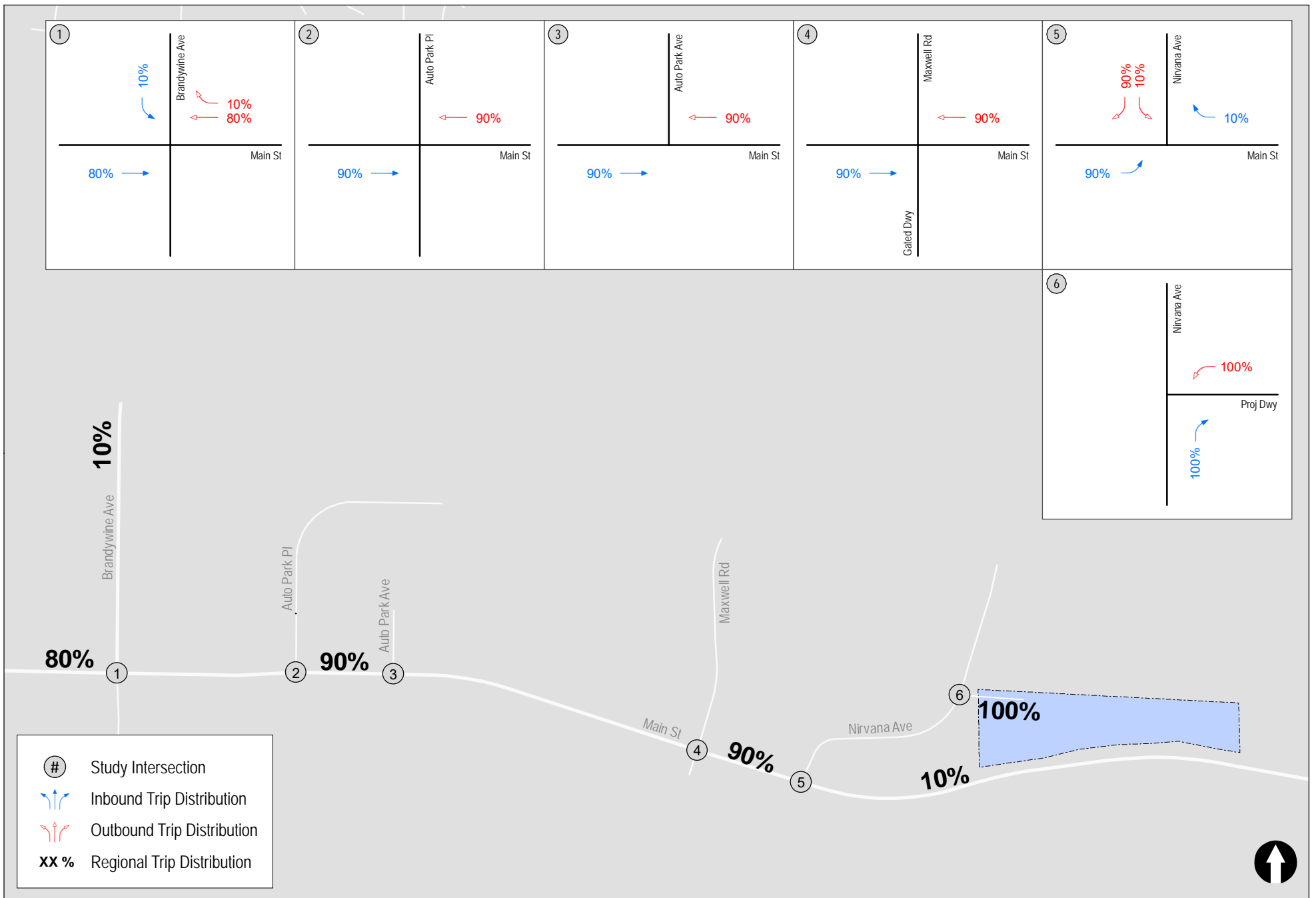


Figure 8-1
Project Traffic Distribution



Figure 8-2
Project Traffic Volumes

Chula Vista Self Storage

9.0 ANALYSIS OF EXISTING + PROJECT CONDITIONS

Table 9-1 summarizes the peak hour intersection operations under Existing + Project conditions in the study area. As shown, the study area intersections are calculated to continue to operate acceptably at LOS D or better during the AM and PM peak hours.

Figure 9-1 shows the Existing + Project traffic volumes. *Appendix E* contains the Existing + Project intersection analysis worksheets.

**TABLE 9-1
EXISTING + PROJECT INTERSECTION OPERATIONS**

Intersection	Control Type	Peak Hour	Existing		Existing + Project		Δ^c
			Delay ^a	LOS ^b	Delay	LOS	
1. Main Street / Brandywine Avenue	Signal	AM	43.4	D	45.3	D	1.9
		PM	50.1	D	53.9	D	3.8
2. Main Street / Auto Park Place	Signal	AM	3.6	A	3.8	A	0.2
		PM	18.7	B	19.4	B	0.7
3. Main Street / Auto Park Avenue	Signal	AM	1.9	A	2.2	A	0.3
		PM	1.7	A	1.8	A	0.1
4. Main Street / Maxwell Road	Signal	AM	24.6	C	25.0	C	0.4
		PM	30.9	C	31.4	C	0.5
5. Main Street / Nirvana Avenue	Signal	AM	9.4	A	14.3	B	4.9
		PM	12.8	B	15.3	B	2.5
6. Nirvana Avenue / Project Driveway	MSSC ^d	AM	DNE	DNE	10.7	B	-
		PM	DNE	DNE	14.1	B	-

Footnotes:

- a. Average delay expressed in seconds per vehicle.
- b. Level of Service.
- c. Δ denotes an increase in delay due to project.
- d. MSSC – Minor Street Stop Controlled intersection. Worst-case movement approach delay and LOS reported.

General Notes:

- 1. DNE – does not exist.

SIGNALIZED		UNSIGNALIZED	
DELAY/LOS THRESHOLDS		DELAY/LOS THRESHOLDS	
Delay	LOS	Delay	LOS
0.0 ≤ 10.0	A	0.0 ≤ 10.0	A
10.1 to 20.0	B	10.1 to 15.0	B
20.1 to 35.0	C	15.1 to 25.0	C
35.1 to 55.0	D	25.1 to 35.0	D
55.1 to 80.0	E	35.1 to 50.0	E
≥ 80.1	F	≥ 50.1	F

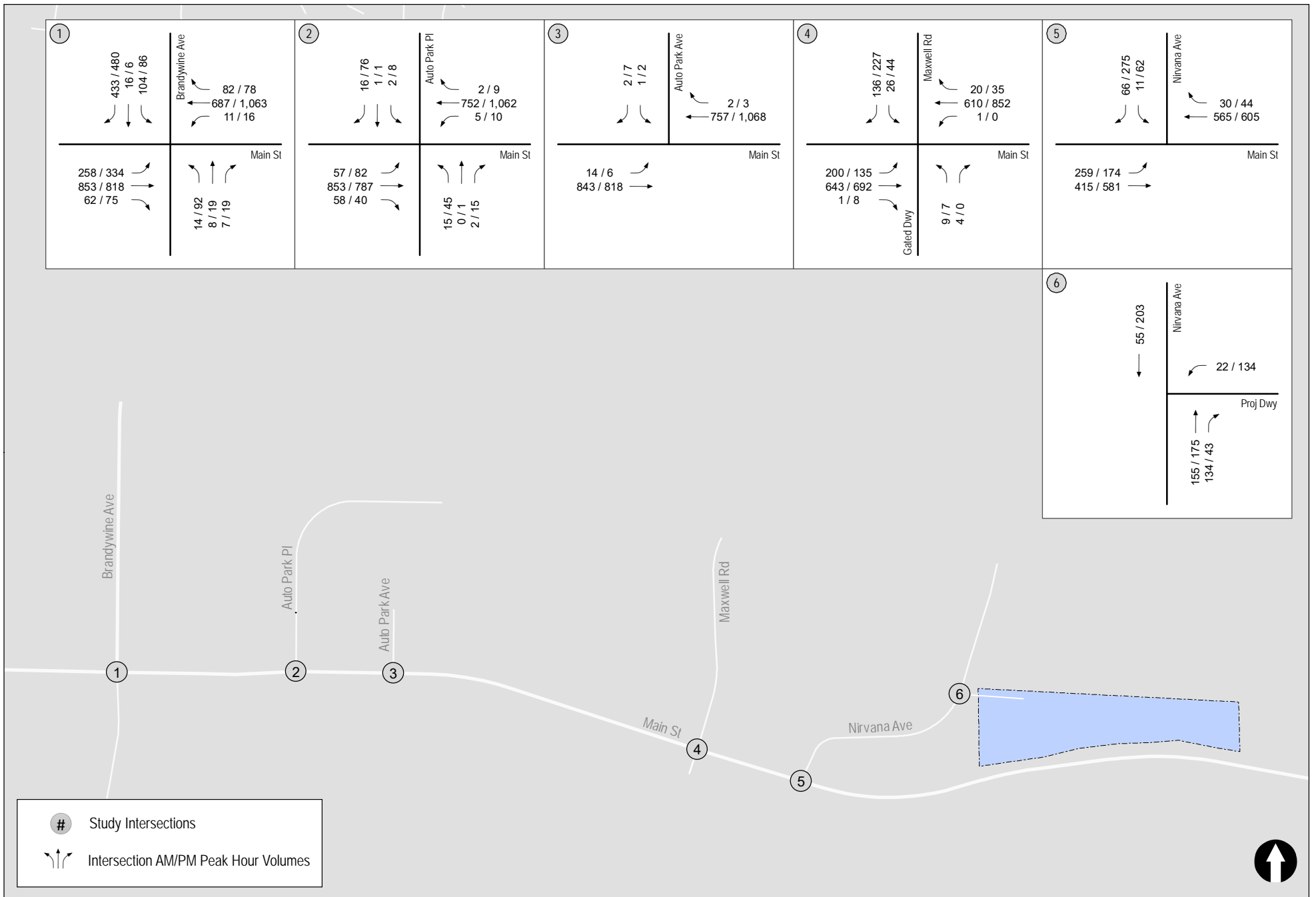


Figure 9-1
Existing + Project Traffic Volumes

10.0 ACCESS ASSESSMENT

As described in *Section 2.0*, the Project's access would be via an unsignalized driveway from Nirvana Avenue from an existing easement. The driveway will be approximately 28 feet wide and serve as full access. The driveway will be fronting a two-lane undivided roadway that primarily serves business along Nirvana Avenue and Energy Way. No traffic is expected to make a southbound left-turn into the site and a westbound right-turn out of the site as Nirvana Avenue reaches a terminus north of the Project site. The Project driveway is calculated to operate at LOS B.

As part of the civil engineering plan preparation, truck turning template analyses were conducted at the Project driveway. In addition, Main Street and Nirvana Avenue currently serve heavy trucks. Therefore, heavy trucks can be accommodated in the study area.

10.1 Queueing Analysis

Access to the site will be via one driveway on Nirvana Avenue as described above. A two-lane undivided roadway will be along the Project frontage; however, the entire inbound Project traffic volume is anticipated to traverse on Main Street. No traffic is expected to make a left-turn into the site, therefore, a left-turn lane is not necessary and no queue issue is anticipated. Likewise, the westbound right-turn movement on Main Street entering Nirvana Avenue is anticipated to have no queue issues since the vast majority of Project traffic will access the site from the west. Consideration was given to analyzing the southbound right-turn queue. However, the southbound right-turn movement on Nirvana Avenue entering Main Street is anticipated to have no queue issues since this outbound traffic will make a southbound right-turn movement during either a green phase for the southbound movements or a protected right-turn overlap green phase. In order to ensure vehicular queues turning into Nirvana Avenue won't exceed the eastbound left-turn pocket of the Main Street / Nirvana Avenue intersection, resulting in potential congestion and backups along Main Street, a queueing analysis was conducted using simulation provided by the SimTraffic analysis software.

Per the *City of Chula Vista Transportation Study Guidelines*, if actual heavy vehicle percentage data is not available, the minimum recommended value is 3%. Therefore, the synchro files consider that 3% of traffic traversing in the study area is comprised of heavy vehicles in both the operations and queue length calculations. The queue length results are reported in units of feet. Given that an average car length is 25 feet, the queue length value can also be presented in number of vehicles.

Table 10-1 shows the queue summary results under Existing + Project conditions. As shown in **Table 10-1**, the 95th percentile eastbound left-turn queue at the Main Street / Nirvana Avenue intersection is calculated to be 173' or less (approximately 7 vehicles, assuming an average car length of 25') during the AM and PM peak hours. The 95th-percentile queue is defined to be the queue length that has only a 5-percent probability of being exceeded during the analysis time period. Therefore, the existing eastbound left-turn storage of 220 feet at the Main Street / Nirvana Avenue intersection is expected to be able to accommodate the Project-induced increase in queue.

Appendix F contains the Existing + Project queue calculation worksheets.

**TABLE 10-1
QUEUE SUMMARY**

Intersection	Movement	Peak Hour	Existing + Project	
			Storage	Queue Length
5. Main St / Nirvana Ave	EBL	AM	220'	173'
		PM		114'

General Notes:

1. 95th percentile queues reported.
2. Simulation was conducted for 5 runs of 1-hour recording.

10.2 Sight Distance

LLG performed a field survey (no drawings/plans were prepared, rather, only field measurements were conducted) to determine whether or not the minimum required intersection sight distances can be achieved for drivers turning left from the Project driveway. Per the *AASHTO Geometric Design of Highways and Street Manual*, the point of observation for our review is offset 14.5 feet from the edge of the traveled way. The driver's eyes are measured at 3.5 feet from the ground surface, and the object to be observed is also 3.5 feet from the ground. The location of the object to be observed is located in the middle of the travel lane.

Based on the proposed traffic control at the Project driveway, the appropriate sight distance formula would reflect the left-turn from the minor road with stop control would represent the appropriate constraint on drivers leaving the Project site. The formula below has variables which are dependent on the design speed of the major road (V_{major}) and expected maneuver time (t_g) pertaining to each specific turning movement. AASHTO recommends adjusting the intersection sight distance accordingly only for approaches with vertical grades exceeding -3% or +3%.

Per the above guidelines, the intersection distance for both left and right approaches of the minor leg must be determined for vehicles turning left out of the driveway. Looking left from the driveway, the minimum required intersection sight distance is 386 feet, and looking right from the driveway towards the westbound approach the sight distance is 423 feet. Based on our field observations, sight distance requirements are met for both eastbound (386 feet) and westbound (423 feet) approaches.

Table 10-2 shows the sight distance calculations.

TABLE 10-2
SIGHT DISTANCE CALCULATIONS

Equation	$V_{\text{major}}^{\text{a}}$	Viewing Direction	t_g^{b}	ISD ^c
$ISD = 1.47 V_{\text{major}} t_g$	25 mph	Traffic approaching minor road from the left	10.5 seconds	386 feet
		Traffic approaching minor road from the right	11.5 seconds	423 feet

Footnotes:

- a. V_{major} = design speed of major road (mph)
- b. t_g = time gap for minor road vehicle to enter the major road (s)
- c. ISD = intersection sight distance (length of the leg of sight triangle along the major road) (ft)

General Notes:

- 1. Equation per AASHTO's Case B – Intersections with stop control on the minor road (Section 9.5.3.2). Excerpt included in *Appendix F*.

Similarly, based on CVSD RWY-05 of the *City of Chula Vista Design and Construction Standard Drawings 2017*, the required corner sight distance for drivers turning left from the Project driveway onto a major road with a design speed of 25 mph is 280 feet for both eastbound and westbound approaches. However, this does not take into account the time gap adjustment factor for a roadway with combination trucks which would equate to 423 feet per the AASHTO manual. To be conservative, sight distance requirement were based on 423 feet for both the eastbound and westbound approaches.

Appendix F contains excerpts from AASHTO and the *City of Chula Vista Design and Construction Standard Drawings 2017*, and a figure showing the results.

11.0 ACTIVE TRANSPORTATION

11.1 Pedestrian Mobility

Nirvana Avenue – Within the study area, Nirvana Avenue currently provides contiguous sidewalks on both sides north and south of the Project site. The nearest signalized intersection is less than ¼ mile south of the Project site, at the Main Street / Nirvana Avenue intersection, and provides a controlled crossing location with pedestrian push buttons and crosswalks.

Main Street – Within the study area, Main Street currently provides contiguous sidewalks on the north side and non-contiguous sidewalks on the south side with the exception of east of Nirvana Avenue where contiguous sidewalks are provided on the north side only. Signalized intersections are less than ½ mile apart along Main Street, and provides a controlled crossing location with pedestrian push buttons and crosswalks.

Crosswalks with pedestrian phase are provided on the north and east legs of the Main Street / Nirvana Avenue intersection. ADA curb ramps with detectable warning strips are provided as well. Based on the *City of Chula Vista Active Transportation Plan*, no sidewalk improvements are planned within ½ mile of the Project site. The Project will generate very little walking time since the Project is in industrial and there are no retail or restaurant opportunities within a mile of the Project site that would encourage pedestrian activity.

Per the City of Chula Vista Capital Improvement Projects, STM388 states that Main Street would be widened eastbound to include a third thru lane, a continuation of the Class II bike lane, curb, gutter and sidewalk. The timing and bidding for this improvement is expected to occur Fall 2022.

11.2 Bicycle Mobility

A bicycle network inventory was conducted for the study area. Based on a review of the *City of Chula Vista General Plan*, a Class II bike lane is provided along Main Street within the study area. There are currently no bike lanes or bike routes provided on Nirvana Avenue within the study area. None are planned along this new Mobility Element street.

Based on the *City of Chula Vista Active Transportation Plan*, a Class IV Cycle Track is planned to be constructed on Heritage Road east of the Project site. The Project will generate very little biking time since the Project is in industrial and there are no retail or restaurant opportunities within a mile of the Project site that would encourage bicycle activity.

11.3 Transit Mobility

The nearest bus stops (one northbound on Brandywine Avenue and one westbound on Main Street) are located approximately 1 mile from the Project site. Benches are provided at both of these locations, at the Main Street / Brandywine Avenue intersection. There are multiple bus stops along Main Street. These stops are served by MTS bus route 704 which runs from the E Street Transit Center to the Palomar Street Transit Center. MTS bus route 704 runs along 3rd Avenue, Naples Street, Brandywine Avenue, Main Street and Orange Avenue. Weekday service begins at 5:22 AM

with 30-minute headways and ends at 9:53 PM. Saturday service begins at 5:51 AM with 1-hour headways and ends at 9:19 PM. Sunday service begins at 7:22 AM with 1-hour headways and ends at 6:54 PM. **Appendix G** contains the bus route schedule and map.

12.0 CONCLUSIONS

The Nirvana Business Park is an industrial complex consisting of three two-story buildings and one three-story storage facility totaling 299,218 square feet on 13.31 acres, located at 821 Main Street in the City of Chula Vista.

Vehicle Miles Traveled (VMT)

The Project is located in a VMT efficient area (at or below the base year average VMT/employee) based on the applicable location-based screening map produced by SANDAG. The baseline average regional VMT/employee is 18.9 per the SANDAG Series 14 (Year 2016) ABM2+ data.

Using the SANDAG screening map for industrial projects under per employee measurements, the Project would be expected to generate 23.95 VMT/employee. Hence, the Project would not require a VMT analysis and the Project is presumed to have a less than significant VMT impact.

Local Mobility Analysis (LMA)

The study area intersections are calculated to continue to operate acceptably at LOS D or better during the AM and PM peak hours under all scenarios. Based on the established criteria, no substantial effects are calculated in terms of intersection capacity for the project. Therefore, improvements are not required under these analyses.

Queue and Sight Distance Analysis

The Project's access would be via an unsignalized driveway from Nirvana Avenue from an existing easement. The driveway will be approximately 28 feet wide and serve as full access. The driveway will be fronting a two-lane undivided roadway that primarily serves business along Nirvana Avenue and Energy Way.

Based on Synchro simulation, under Existing + Project conditions, the 95th percentile eastbound left-turn queue at the Main Street / Nirvana Avenue intersection is calculated to be 173' or less (approximately 7 vehicles, assuming an average car length of 25') during the AM and PM peak hours. Therefore, the existing storage of 220 feet is expected to be able to accommodate the eastbound left-turn queue. Also, based on our field observations, sight distance requirements are met for both eastbound and westbound approaches.

Active Transportation

Pedestrian Mobility

Contiguous sidewalks are present on both sides north and south of the Project site along Nirvana Avenue. The sidewalks are continuous between the Project driveway and the nearest signalized intersection less than ¼ mile south of the Project site, at the Main Street / Nirvana Avenue intersection. Main Street currently provides contiguous sidewalks on the north side and non-contiguous sidewalks on the south side with the exception of east of Nirvana Avenue where contiguous sidewalks are provided on the north side only. Signalized intersections are less than ½ mile apart along Main Street, and each signal provides a controlled crossing location with pedestrian

push buttons and crosswalks. Based on the *City of Chula Vista Active Transportation Plan*, no sidewalk improvements are planned within ½ mile of the Project site.

Bicycle Mobility

A Class II bike lane is provided along Main Street within ¼ mile of the Project site. There are currently no bike lanes or bike routes provided on Nirvana Avenue within the study area. None are planned along this new Mobility Element street. Based on the *City of Chula Vista Active Transportation Plan*, a Class IV Cycle Track is planned to be constructed on Heritage Road east of the Project site.

Transit Mobility

The nearest bus stop is located approximately 1 mile from the Project site with benches provided at each location, at the Main Street / Brandywine Avenue intersection. There are multiple bus stops along Main Street. These stops are served by MTS bus route 704 which runs from the E Street Transit Center to the Palomar Street Transit Center.

TECHNICAL APPENDICES
CHULA VISTA NIRVANA
Chula Vista, California
January 12, 2023

LLG Ref. 3-21-3405

**Linscott, Law &
Greenspan, Engineers**

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APPENDICES

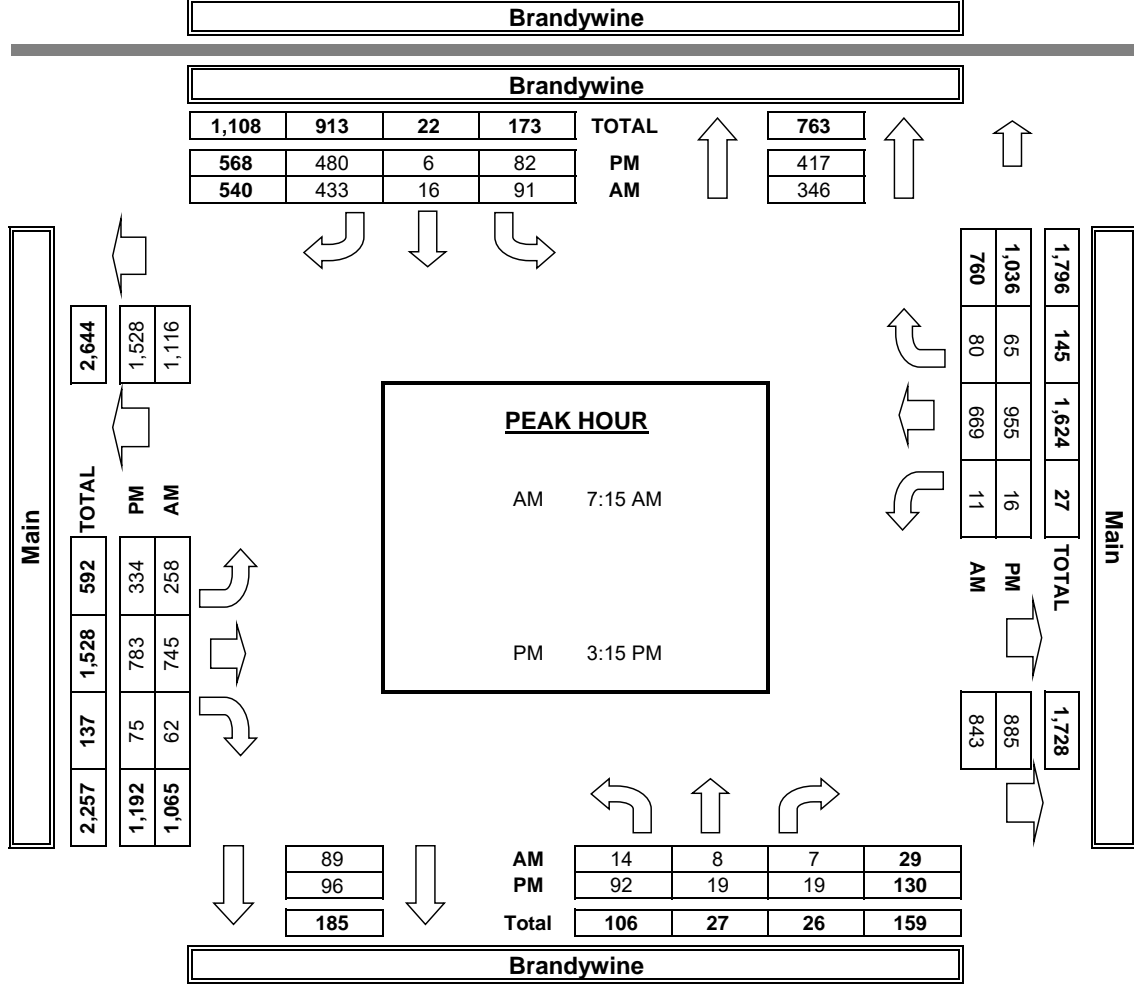
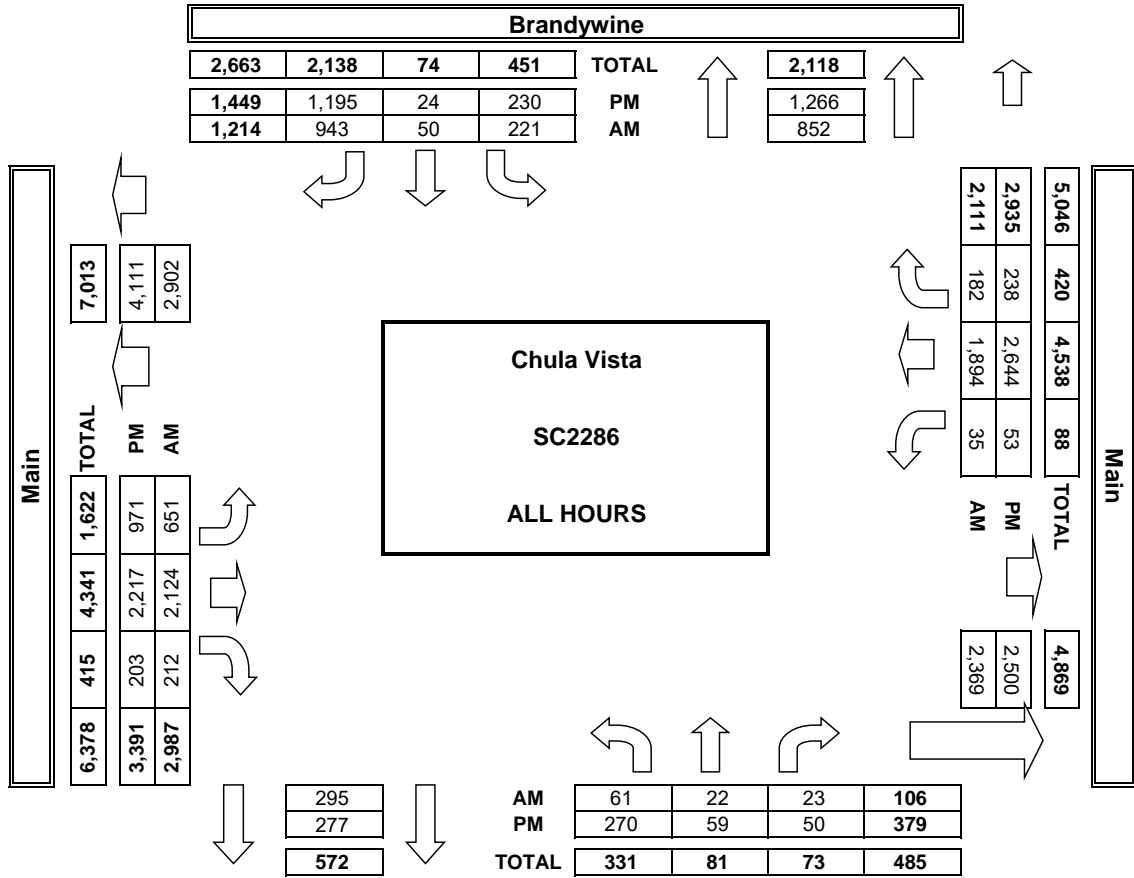
APPENDIX

- A. Intersection Manual Count Sheets; Signal Timing Plans
- B. SANDAG Screening Map
- C. Intersection Methodology and City of Chula Vista Transportation Study Guidelines synchro parameter specifications
- D. Existing Peak Hour Intersection Analysis Worksheets
- E. Existing + Project Peak Hour Intersection Analysis Worksheets
- F. Queue Calculation Sheets and excerpts from the *AASHTO Geometric Design of Highways and Street Manual* and the *City of Chula Vista Design and Construction Standard Drawings 2017* on sight distance calculations
- G. Bus Route Map and Schedule

APPENDIX A

INTERSECTION MANUAL COUNT SHEETS; SIGNAL TIMING PLANS

AimTD LLC
TURNING MOVEMENT COUNTS

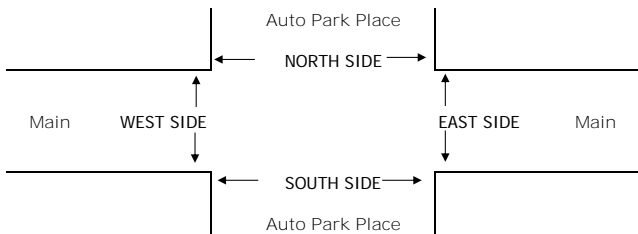


INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

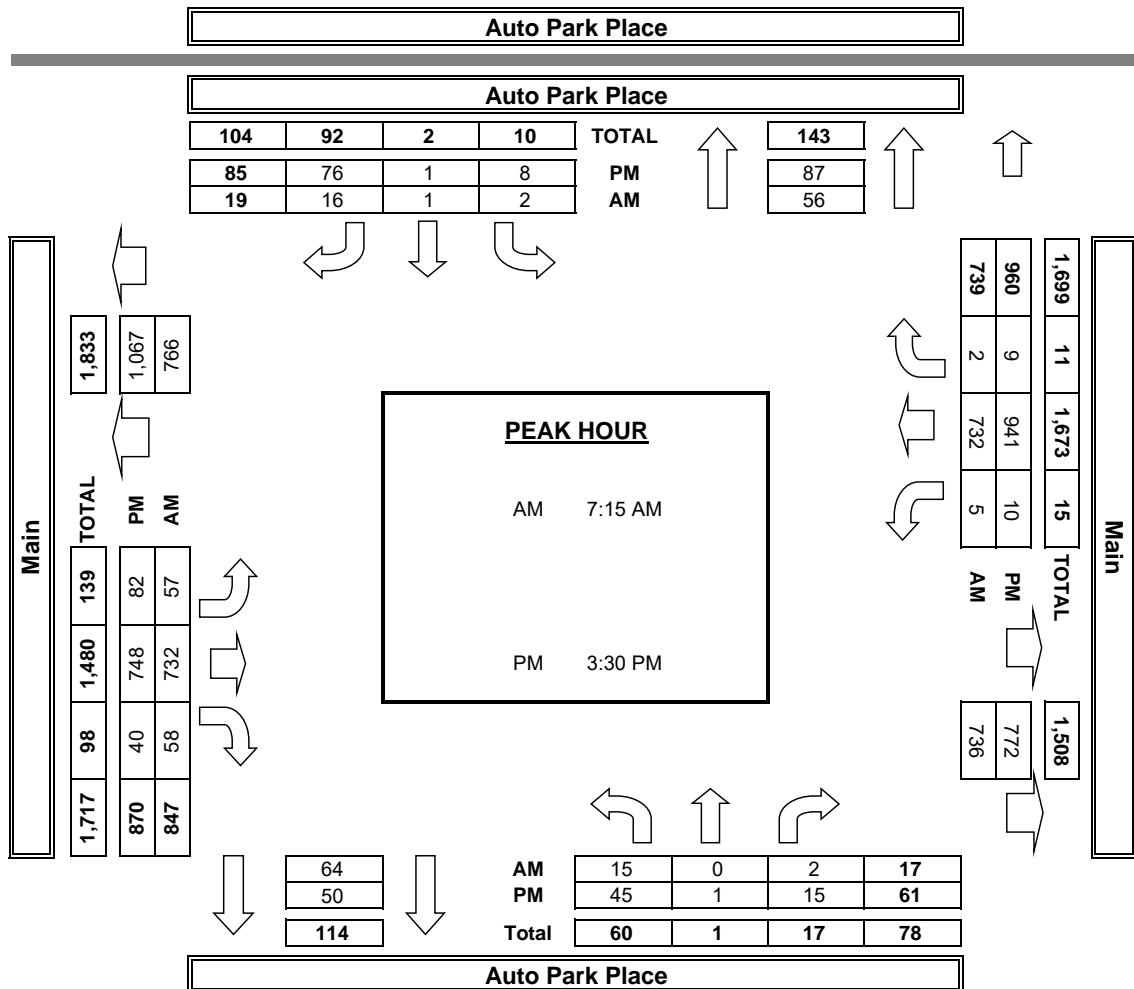
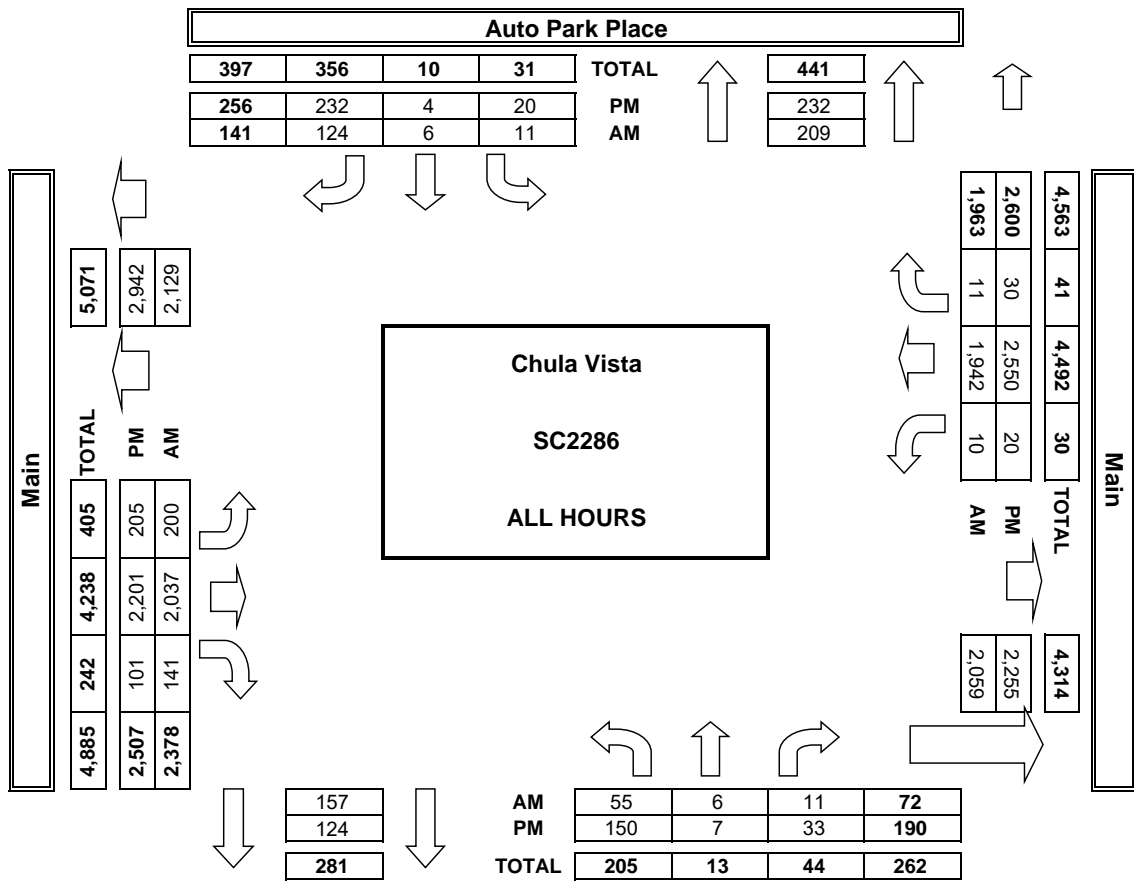
DATE: Thu, Feb 27, 20	LOCATION: NORTH & SOUTH: EAST & WEST:	Chula Vista Auto Park Place Main	PROJECT #: LOCATION #: CONTROL:	SC2286 229 SIGNAL																												
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AM	▲	←	W	→	E	▶																										
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MD																																
OTHER																																

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL	U-TURNS				
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	PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
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PM BEGIN PEAK HR	3:30 PM					1					0				

AimTD LLC
TURNING MOVEMENT COUNTS



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, Feb 27, 20	LOCATION: NORTH & SOUTH: EAST & WEST:	Chula Vista Auto Park Main	PROJECT #: LOCATION #: CONTROL:	SC2286 246 SIGNAL
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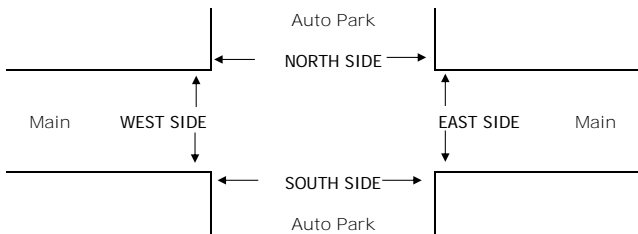
AM	▲	N
PM	▼	S
MD	◀	W
OTHER	▶	E

Add U-Turns to Left Turns

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
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U-TURNS				
NB	SB	EB	WB	TTL
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	APPROACH %	0%	0%	0%	22%	0%	78%	1%	99%	0%	0%	100%	0%							
	PEAK HR FACTOR	0.000			0.750			0.828			0.826			0.894						
	APP/DEPART	0	/	9	9	/	0	785	/	782	951	/	954	0						

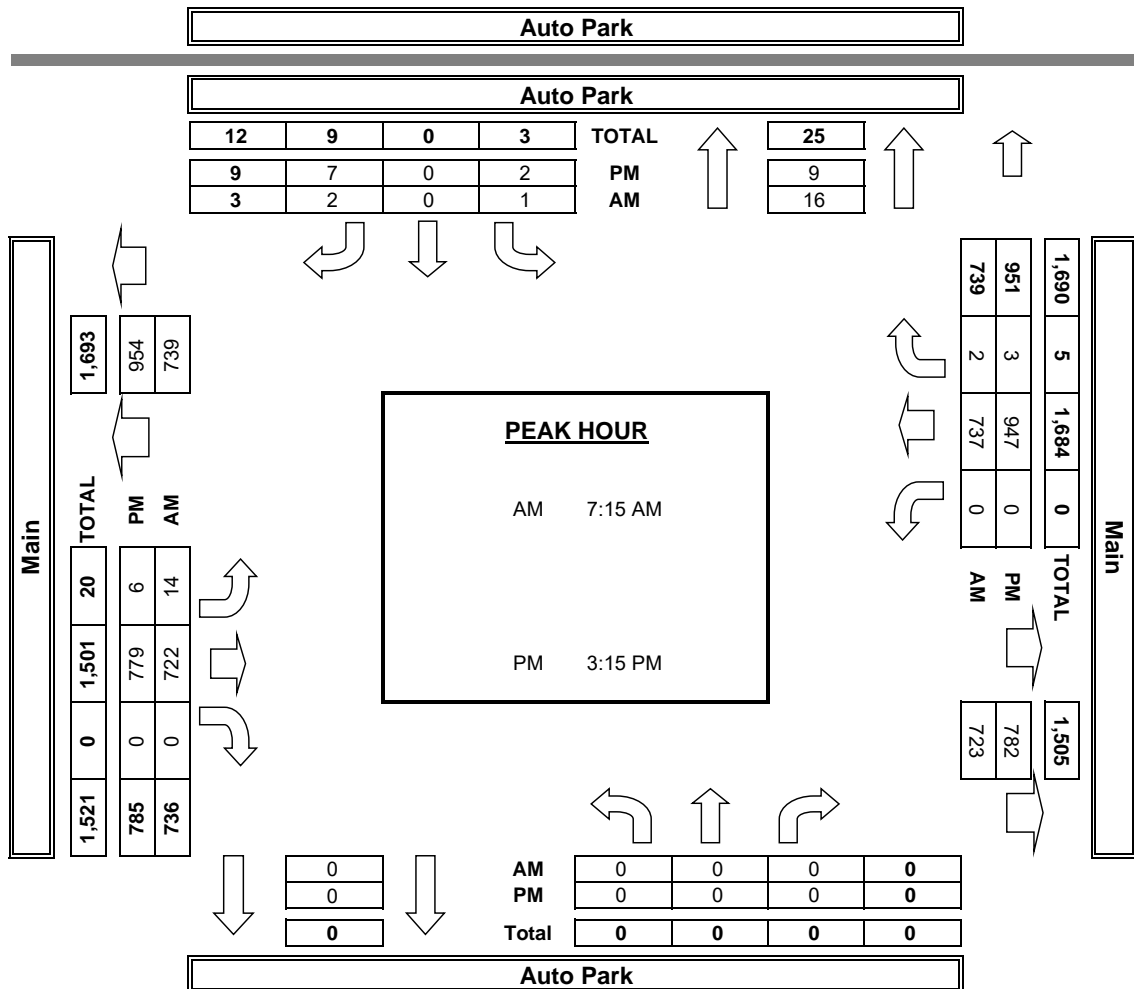
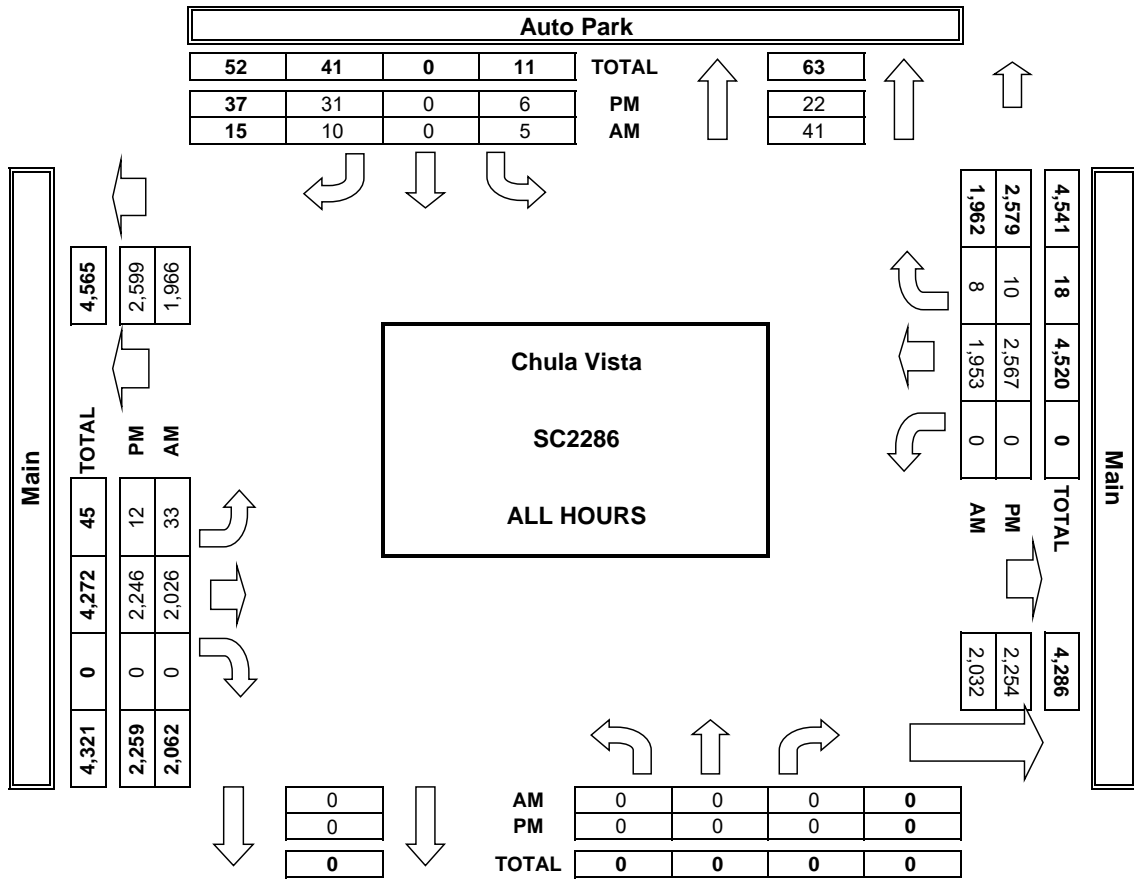


	PEDESTRIAN + BIKE CROSSINGS				
	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
AM	6:30 AM	0	0	0	0
	6:45 AM	1	0	0	1
	7:00 AM	1	0	0	1
	7:15 AM	0	0	0	0
	7:30 AM	0	2	0	2
	7:45 AM	1	0	0	1
	8:00 AM	0	1	0	1
	8:15 AM	1	0	0	1
	8:30 AM	0	0	0	0
	8:45 AM	0	0	0	0
	9:00 AM	1	0	0	1
	9:15 AM	1	0	0	1
	TOTAL	6	3	0	10
	AM BEGIN PEAK HR	7:15 AM			0
PM	2:30 PM	0	0	0	0
	2:45 PM	2	0	0	2
	3:00 PM	0	0	0	0
	3:15 PM	0	0	0	0
	3:30 PM	0	0	0	0
	3:45 PM	1	0	0	1
	4:00 PM	1	2	0	3
	4:15 PM	1	1	0	2
	4:30 PM	0	0	0	0
	4:45 PM	1	0	0	1
	5:00 PM	2	0	0	2
	5:15 PM	2	0	0	2
	TOTAL	10	3	0	13
	PM BEGIN PEAK HR	3:15 PM			1

	PEDESTRIAN CROSSINGS				
	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
AM	6:30 AM	0	0	0	0
	6:45 AM	1	0	0	1
	7:00 AM	1	0	0	1
	7:15 AM	0	0	0	0
	7:30 AM	0	0	0	0
	7:45 AM	1	0	0	1
	8:00 AM	0	0	0	0
	8:15 AM	1	0	0	1
	8:30 AM	0	0	0	0
	8:45 AM	0	0	0	0
	9:00 AM	0	0	0	0
	9:15 AM	0	0	0	0
	TOTAL	4	0	0	4
	AM BEGIN PEAK HR	1	0	0	1
PM	2:30 PM	0	0	0	0
	2:45 PM	1	0	0	1
	3:00 PM	0	0	0	0
	3:15 PM	0	0	0	0
	3:30 PM	0	0	0	0
	3:45 PM	0	0	0	0
	4:00 PM	1	0	0	1
	4:15 PM	0	0	0	0
	4:30 PM	0	0	0	0
	4:45 PM	1	0	0	1
	5:00 PM	0	0	0	0
	5:15 PM	0	0	0	0
	TOTAL	3	0	0	3
	PM BEGIN PEAK HR	1	0	0	1

	BICYCLE CROSSINGS				
	NS	SS	ES	WS	TOTAL
AM	6:30 AM	0	0	0	0
	6:45 AM	0	0	0	0
	7:00 AM	0	0	0	0
	7:15 AM	0	0	0	0
	7:30 AM	0	2	0	2
	7:45 AM	0	0	0	0
	8:00 AM	0	1	0	1
	8:15 AM	0	0	0	0
	8:30 AM	0	0	0	0
	8:45 AM	0	0	0	0
	9:00 AM	1	0	0	1
	9:15 AM	1	0	0	1
	TOTAL	2	3	0	6
	AM BEGIN PEAK HR	0	0	0	0
PM	2:30 PM	0	0	0	0
	2:45 PM	1	0	0	1
	3:00 PM	0	0	0	0
	3:15 PM	0	0	0	0
	3:30 PM	0	0	0	0
	3:45 PM	1	0	0	1
	4:00 PM	0	2	0	2
	4:15 PM	1	1	0	2
	4:30 PM	0	0	0	0
	4:45 PM	0	0	0	0
	5:00 PM	2	0	0	2
	5:15 PM	2	0	0	2
	TOTAL	7	3	0	10
	PM BEGIN PEAK HR	0	0	0	0

AimTD LLC
TURNING MOVEMENT COUNTS



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, Feb 27, 20 LOCATION: Chula Vista NORTH & SOUTH: Maxwell EAST & WEST: Main PROJECT #: SC2286 LOCATION #: 167 CONTROL: SIGNAL

NOTES: AM PM MD OTHER N W E S

Add U-Turns to Left Turns

Table with columns for NORTHBOUND, SOUTHBOUND, EASTBOUND, WESTBOUND and TOTAL. Sub-columns include NL, NT, NR, SL, ST, SR, EL, ET, ER, WL, WT, WR.

U-TURNS table with columns NB, SB, EB, WB, TTL.

AM Peak Hour table (6:30 AM - 9:15 AM) showing volumes and approach percentages for Northbound, Southbound, Eastbound, and Westbound.

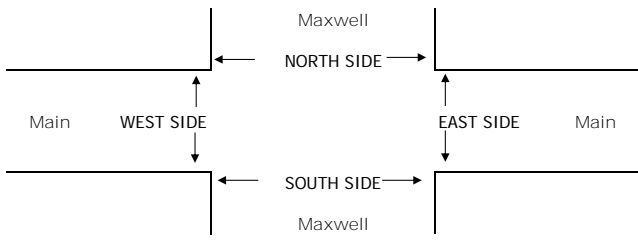
U-TURNS table for AM peak hour.

Summary statistics for AM peak hour including VOLUMES, APPROACH %, APP/DEPART, and PEAK HR FACTOR.

PM Peak Hour table (2:30 PM - 5:15 PM) showing volumes and approach percentages for Northbound, Southbound, Eastbound, and Westbound.

U-TURNS table for PM peak hour.

Summary statistics for PM peak hour including VOLUMES, APPROACH %, APP/DEPART, and PEAK HR FACTOR.



AM section of the pedestrian and bicycle crossings table.

PEDESTRIAN + BIKE CROSSINGS table with columns N SIDE, S SIDE, E SIDE, W SIDE, TOTAL.

PEDESTRIAN CROSSINGS table with columns N SIDE, S SIDE, E SIDE, W SIDE, TOTAL.

BIICYCLE CROSSINGS table with columns NS, SS, ES, WS, TOTAL.

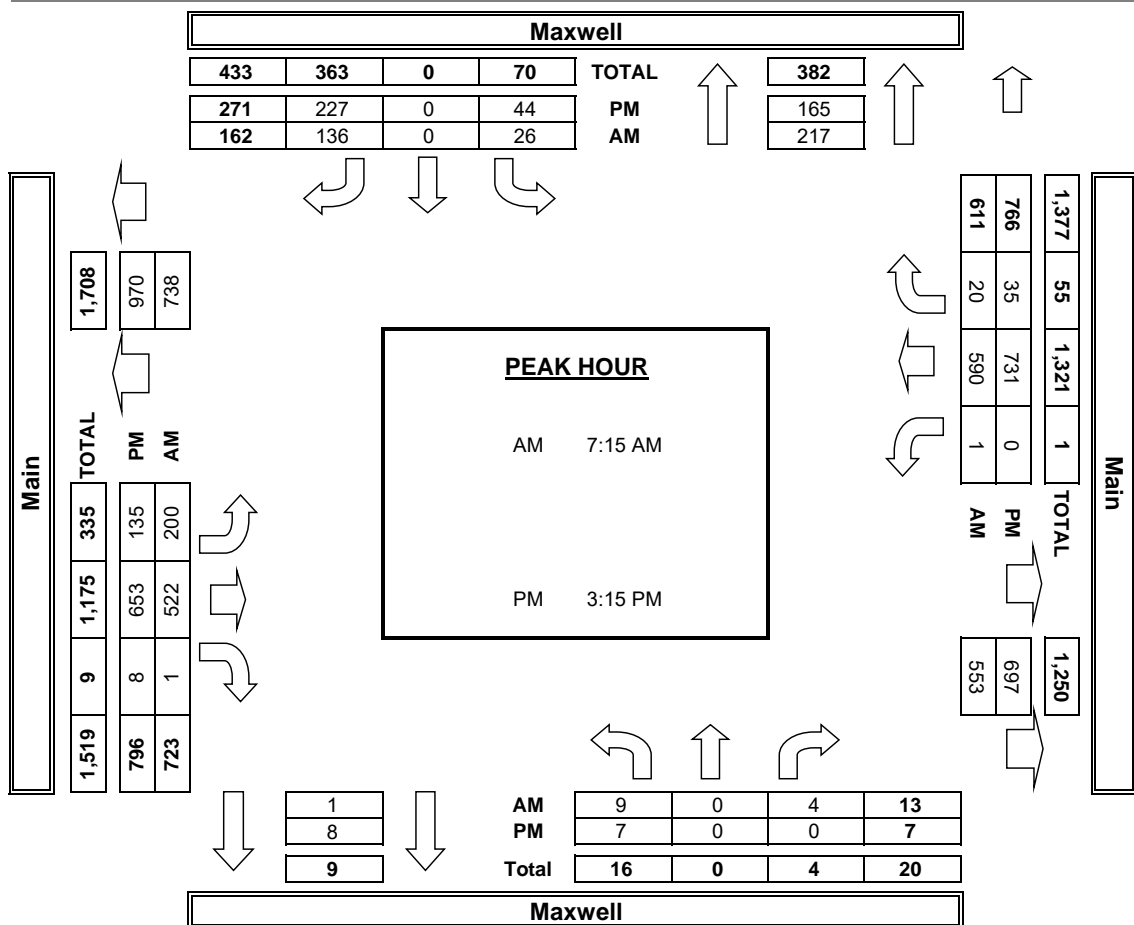
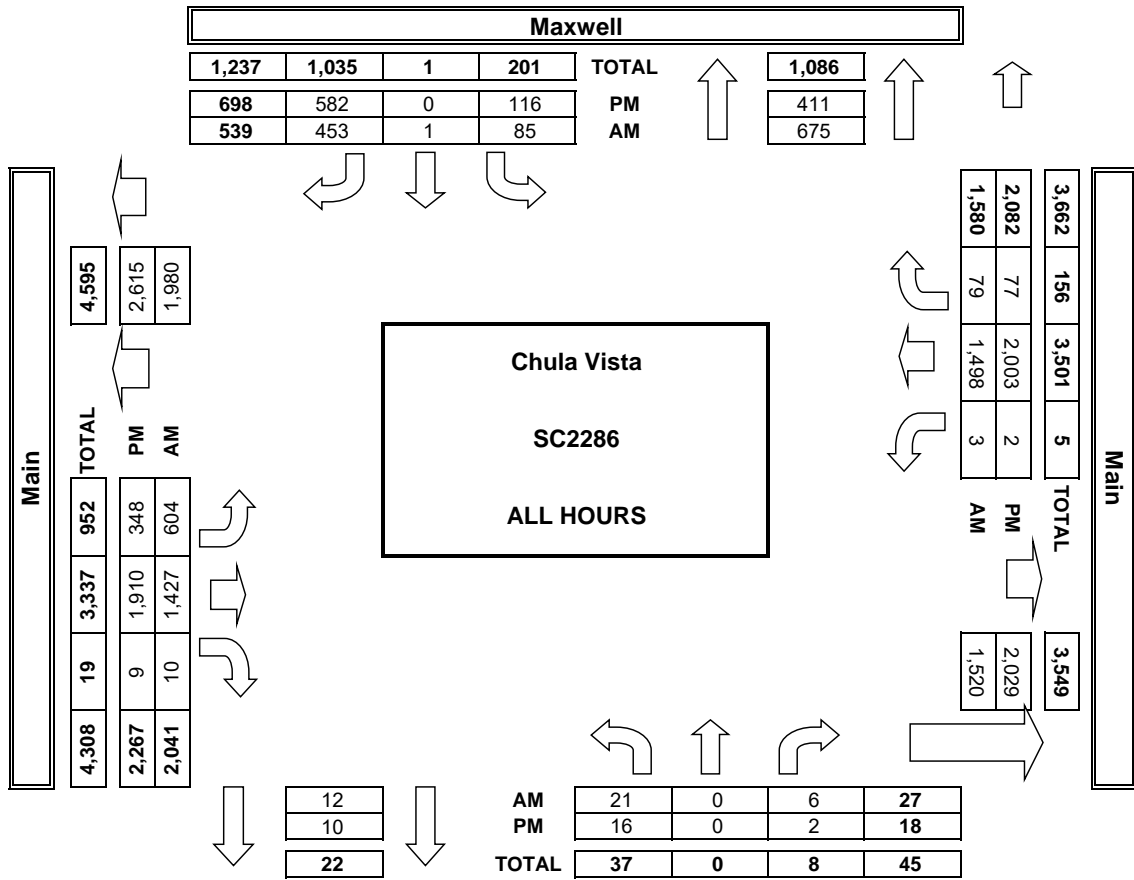
PM section of the pedestrian and bicycle crossings table.

PEDESTRIAN + BIKE CROSSINGS table with columns N SIDE, S SIDE, E SIDE, W SIDE, TOTAL.

PEDESTRIAN CROSSINGS table with columns N SIDE, S SIDE, E SIDE, W SIDE, TOTAL.

BIICYCLE CROSSINGS table with columns NS, SS, ES, WS, TOTAL.

AimTD LLC
TURNING MOVEMENT COUNTS



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
Thu, Feb 27, 20

LOCATION: Chula Vista
NORTH & SOUTH: Nirvana
EAST & WEST: Main

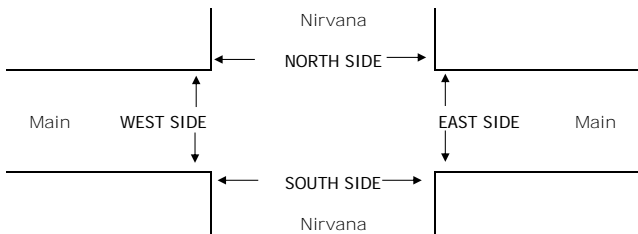
PROJECT #: SC2286
LOCATION #: 139
CONTROL: SIGNAL

NOTES:

AM	▲ N ← W S ▼	▶ E
PM		
MD		
OTHER		

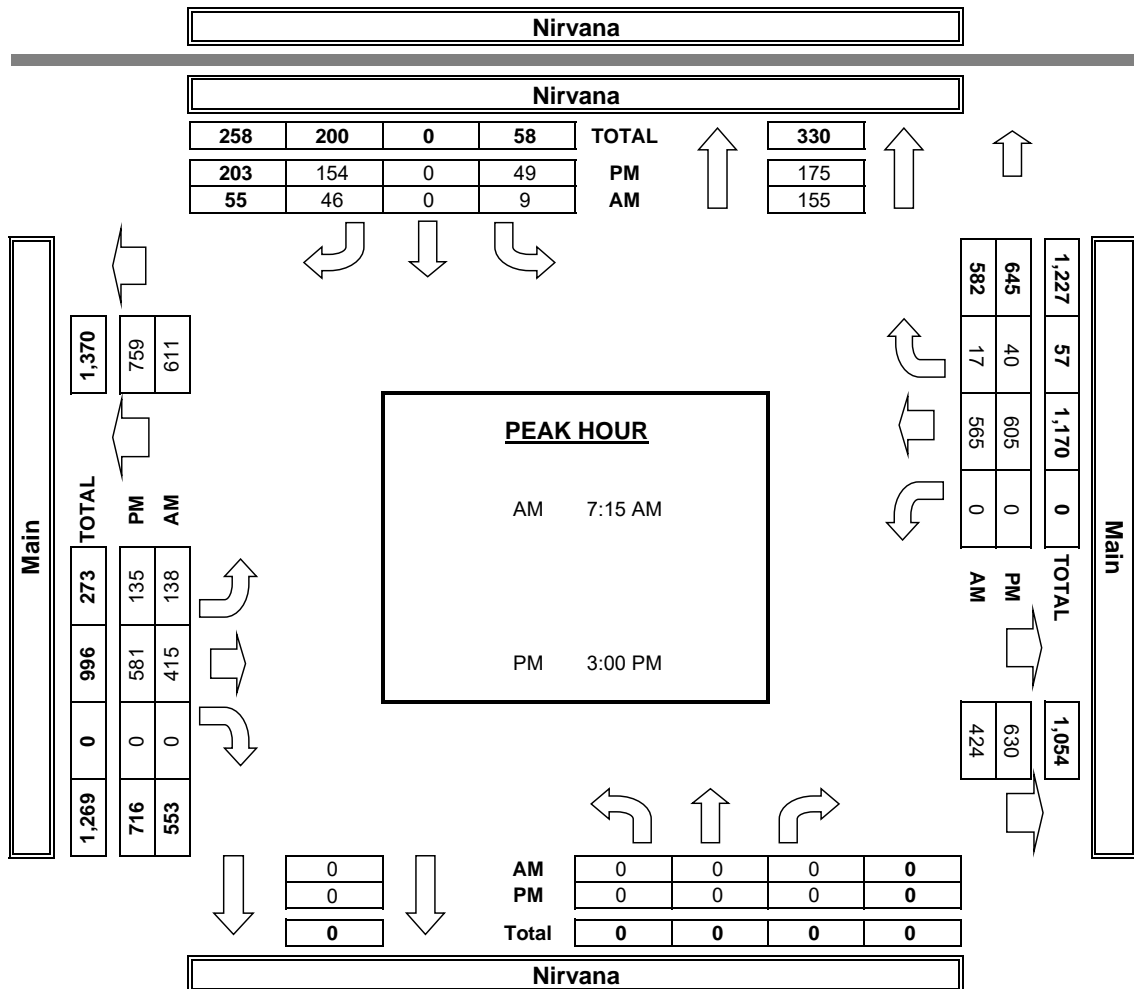
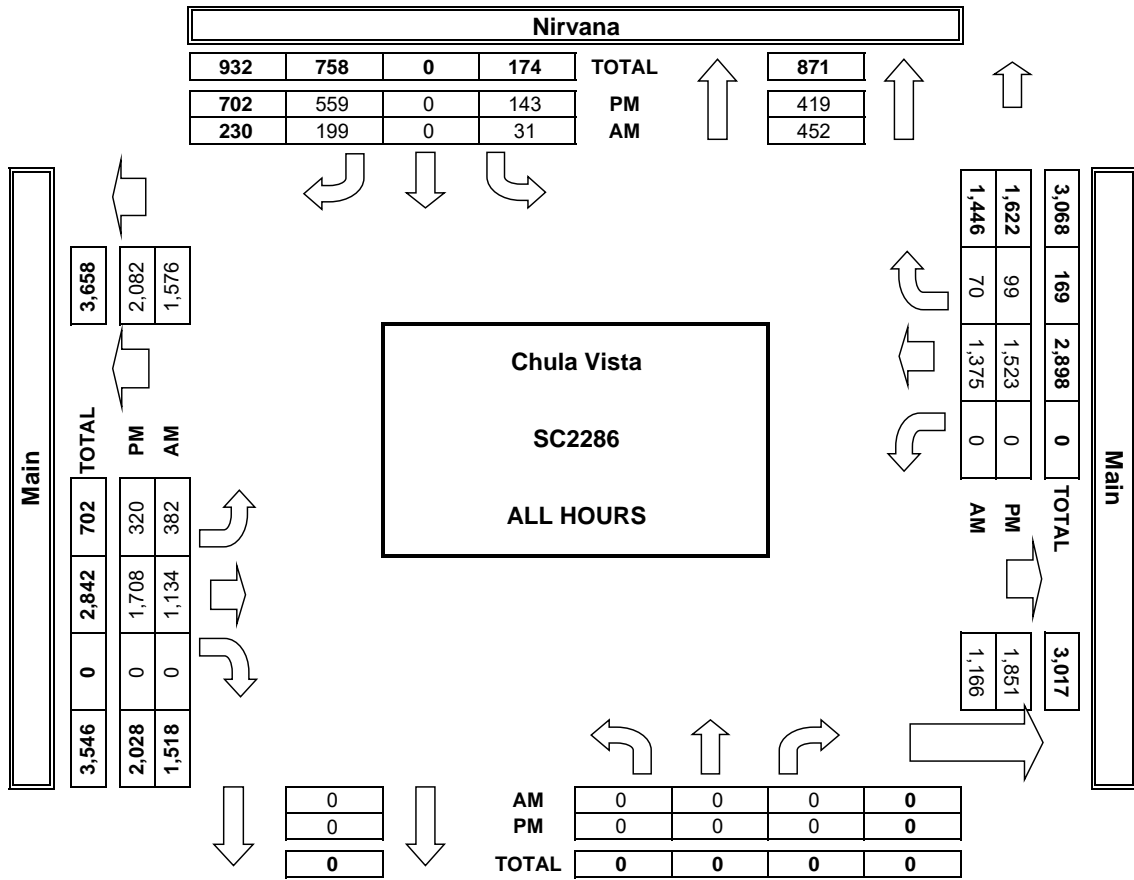
Add U-Turns to Left Turns

	NORTHBOUND <small>Nirvana</small>			SOUTHBOUND <small>Nirvana</small>			EASTBOUND <small>Main</small>			WESTBOUND <small>Main</small>			TOTAL	U-TURNS					
	NL X	NT X	NR X	SL 0.5	ST X	SR 1.5	EL 2	ET 2	ER X	WL X	WT 3	WR 0		NB 0	SB 0	EB 0	WB 0	TTL 0	
AM	6:30 AM	0	0	0	2	0	14	15	119	0	0	122	0	272	0	0	1	0	1
	6:45 AM	0	0	0	0	0	19	26	123	0	0	112	3	283	0	0	0	0	0
	7:00 AM	0	0	0	1	0	18	21	94	0	0	121	8	263	0	0	0	0	0
	7:15 AM	0	0	0	3	0	14	24	97	0	0	147	5	290	0	0	0	0	0
	7:30 AM	0	0	0	1	0	13	21	89	0	0	170	4	298	0	0	0	0	0
	7:45 AM	0	0	0	2	0	8	46	119	0	0	146	5	326	0	0	0	0	0
	8:00 AM	0	0	0	3	0	11	47	110	0	0	102	3	276	0	0	0	0	0
	8:15 AM	0	0	0	2	0	14	35	64	0	0	97	8	220	0	0	0	0	0
	8:30 AM	0	0	0	6	0	20	41	79	0	0	87	14	247	0	0	0	1	1
	8:45 AM	0	0	0	4	0	16	45	86	0	0	98	9	258	0	0	0	0	0
	9:00 AM	0	0	0	4	0	22	30	79	0	0	64	4	203	0	0	1	0	1
	9:15 AM	0	0	0	3	0	30	31	75	0	0	109	7	255	0	0	0	0	0
	VOLUMES	0	0	0	31	0	199	382	1,134	0	0	1,375	70	3,194	0	0	2	1	3
	APPROACH %	0%	0%	0%	13%	0%	87%	25%	75%	0%	0%	95%	5%		0	0	0	0	0
	APP/DEPART	0	/	452	230	/	0	1,518	/	1,166	1,446	/	1,576	0	0	0	0	0	0
	BEGIN PEAK HR	7:15 AM																	
VOLUMES	0	0	0	9	0	46	138	415	0	0	565	17	1,190	0	0	0	0	0	
APPROACH %	0%	0%	0%	16%	0%	84%	25%	75%	0%	0%	97%	3%		0	0	0	0	0	
PEAK HR FACTOR	0.000																		
APP/DEPART	0	/	155	55	/	0	553	/	424	582	/	611	0	0	0	0	0	0	
PM	2:30 PM	0	0	0	12	0	71	31	117	0	0	104	14	349	0	0	0	0	0
	2:45 PM	0	0	0	8	0	48	23	121	0	0	109	8	317	0	0	0	0	0
	3:00 PM	0	0	0	12	0	32	37	146	0	0	146	11	384	0	0	0	0	0
	3:15 PM	0	0	0	14	0	39	39	128	0	0	141	8	369	0	0	0	0	0
	3:30 PM	0	0	0	6	0	52	30	184	0	0	155	10	437	0	0	0	0	0
	3:45 PM	0	0	0	17	0	31	29	123	0	0	163	11	374	0	0	0	0	0
	4:00 PM	0	0	0	13	0	45	25	138	0	0	140	7	368	0	0	0	0	0
	4:15 PM	0	0	0	14	0	37	23	138	0	0	114	9	335	0	0	0	0	0
	4:30 PM	0	0	0	18	0	45	27	162	0	0	109	12	373	0	0	0	0	0
	4:45 PM	0	0	0	9	0	59	26	164	0	0	113	7	378	0	0	0	0	0
	5:00 PM	0	0	0	13	0	59	13	147	0	0	129	1	362	0	0	0	0	0
	5:15 PM	0	0	0	7	0	41	17	140	0	0	100	1	306	0	0	0	0	0
	VOLUMES	0	0	0	143	0	559	320	1,708	0	0	1,523	99	4,352	0	0	0	0	0
	APPROACH %	0%	0%	0%	20%	0%	80%	16%	84%	0%	0%	94%	6%		0	0	0	0	0
	APP/DEPART	0	/	419	702	/	0	2,028	/	1,851	1,622	/	2,082	0	0	0	0	0	0
	BEGIN PEAK HR	3:00 PM																	
VOLUMES	0	0	0	49	0	154	135	581	0	0	605	40	1,564	0	0	0	0	0	
APPROACH %	0%	0%	0%	24%	0%	76%	19%	81%	0%	0%	94%	6%		0	0	0	0	0	
PEAK HR FACTOR	0.000																		
APP/DEPART	0	/	175	203	/	0	716	/	630	645	/	759	0	0	0	0	0	0	



	PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS					
	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL	
AM	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:45 AM	0	1	1	0	2	0	0	0	0	0	0	1	1	0	2
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
TOTAL	0	4	1	0	5	0	0	0	0	0	0	4	1	0	5	
AM BEGIN PEAK HR	7:15 AM															
PM	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:45 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	1	
	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:45 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	1	
	4:00 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	1	
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:00 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	1	
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
TOTAL	3	1	0	0	4	0	0	0	0	0	3	1	0	0	4	
PM BEGIN PEAK HR	3:00 PM															

AimTD LLC
TURNING MOVEMENT COUNTS



INTERSECTION: 137 Brandywine/Main

Group Assignment: **NONE**
 Field Master Assignment: **NONE**
 System Reference Number: **137**

N/S Street Name: **Brandywine Ave**
 E/W Street Name: **Main St**

Last Database Change: **6/23/2021 17:40**

Change Record					
Change	By	Date	Change	By	Date

Notes: _____

Manual Plan
 0 = Automatic
 1-9 = Plan 1-9
 14 = Free
 15 = Flash

Manual Offset
 0 = Automatic
 1 = Offset A
 2 = Offset B
 3 = Offset C

Drop Number	1	<C/0+0+0>
Zone Number	1	<C/0+0+1>
Area Number	0	<C/0+0+2>
Area Address	141	<C/0+0+3>
QuicNet Channel	P:8018:10.242.20	(QuicNet)

Manual Plan		<C/0+A+1>
Manual Offset		<C/0+B+1>

Flash Start	0	<F/1+0+E>
Red Revert	3.0	<F/1+0+F>
All Red Start	5.0	<F/1+C+0>

Exclusive Walk	0	<F/1+0+0>
Exclusive FDW	0	<F/1+0+1>
All Red Clear	0.0	<F/1+0+2>

Communication Addresses

Manual Selection

Start / Revert Times

Exclusive Ped Phase

(Outputs specified in Assignable
 Outputs at E/127+A+E & F)

Row	Column Numbers ---->	Phase							
		1	2	3	4	5	6	7	8
	Phase Names ---->								
0	Ped Walk	0	7	0	0	0	7	0	7
1	Ped FDW	0	21	0	0	0	19	0	30
2	Min Green	4	10	4	10	4	10	4	10
3	Type 3 Disconnect	0	0	0	0	0	0	0	0
4	Added per Vehicle	0.0	1.2	0.0	0.0	0.0	1.2	0.0	0.0
5	Veh Extension	2.0	5.5	2.0	2.0	2.0	5.5	2.0	2.0
6	Max Gap	2.0	6.4	2.0	2.0	2.0	6.4	2.0	2.0
7	Min Gap	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
8	Max Limit	22	50	22	23	42	50	32	23
9	Max Limit 2	0	0	0	0	0	0	0	0
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	PE Min Ped FDW	0	0	0	0	0	0	0	0
C	Cond Serv Check	0	0	0	0	0	0	0	0
D	Reduce Every	0.0	0.9	0.0	0.0	0.0	0.9	0.0	0.0
E	Yellow Change	3.2	4.7	3.2	4.3	3.2	4.7	3.2	4.3
F	Red Clear	1.0	1.7	1.0	1.0	1.0	1.7	1.0	1.0

Phase Timing - Bank 1 <C+0+F=1>

	9	A	B	C	D
	---	---	---	---	---
Phase 1	0	0	0	0	0.0
Phase 2	20	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	20	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	20	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	20	0	0	0	0.0
Max Initial	/				
Alternate Walk	/				
Alternate FDW	/				
Alternate Initial	/				
Alternate Extension	/				

Alternate Timing <C+0+F=1>

	E
RR-1 Delay	0
RR-1 Clear	0
EV-A Delay	0
EV-A Clear	0
EV-B Delay	0
EV-B Clear	0
EV-C Delay	0
EV-C Clear	0
EV-D Delay	0
EV-D Clear	0
RR-2 Delay	0
RR-2 Clear	0
View EV Delay	---
View EV Clear	---
View RR Delay	---
View RR Clear	---

Preempt Timing

	F	Row
Permit	12345678	0
Red Lock	_____	1
Yellow Lock	_____	2
Min Recall	2 6	3
Ped Recall	_____	4
View Set Peds	-----	5
Rest In Walk	_____	6
Red Rest	_____	7
Dual Entry	_____	8
Max Recall	_____	9
Soft Recall	_____	A
Max 2	_____	B
Cond. Service	_____	C
Man Cntrl Calls	_____	D
Yellow Start	_____	E
First Phases	2 6	F

Phase Functions <C+0+F=1>

		Overlap							
Column Numbers ---->		1	2	3	4	5	6	7	8
Row	Overlap Name ---->								
0	Load Switch Number	0	0	0	0	0	0	0	0
1	Veh Set 1 - Phases								
2	Veh Set 2 - Phases								
3	Veh Set 3 - Phases								
4	Neg Veh Phases								
5	Neg Ped Phases								
6	Green Omit Phases								
7	Green Clear Omit Phs.								
8									
9									
A									
B									
C									
D	Green Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
F	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Overlap Assignments <C+0+E=29>

- Extra 1 Flags**
 1 = TBC Type 1
 2 = NEMA Ext. Coord
 3 = Auto Daylight Savings
 4 = Solid FDW on EV
 5 = Extended Status
 6 = International Ped
 7 = Flash - Clear Outputs
 8 = Split Ring

- Extra 2 Flags**
 1 = AWB During Initial
 2 = LMU Installed
 3 = Disable Min Walk
 4 = QuicNet/4 System
 5 = Ignore P/P on EV
 6 =
 7 = Allow QuicNet PE
 8 =

	C	Row
EV-A	0	0
EV-B	0	1
EV-C	0	2
EV-D	0	3
RR-1 *	---	4
RR-2 *	---	5
SE-1	0	6
SE-2	0	7

Preempt Priority
 <C+0+E=125>
 (* RR-1 is always Highest, and RR-2 is always Second Highest)

Row	Column Numbers ---->	E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Flash to PE Circuits	
6	Flash Entry Phases	
7	Disable Yellow Range	
8	Disable Ovp Yel Range	
9	Overlap Yellow Flash	
A	EV-A Phases	2 5
B	EV-B Phases	4 7
C	EV-C Phases	1 6
D	EV-D Phases	3 8
E	Extra 1 Config. Bits	1 3 5
F	IC Select (Interconnect)	2

Configuration <C+0+E=125>

	F
Ext. Permit 1 Phases	
Ext. Permit 2 Phases	
Exclusive Ped Assign	
Preempt Non-Lock	12345678
Ped for 2P Output	2
Ped for 6P Output	6
Ped for 4P Output	
Ped for 8P Output	8
Yellow Flash Phases	
Low Priority A Phases	
Low Priority B Phases	
Low Priority C Phases	
Low Priority D Phases	
Restricted Phases	
Extra 2 Config. Bits	3

Configuration <C+0+E=125>

	F
Fast Green Flash Phase	
Green Flash Phases	
Flashing Walk Phases	
Guaranteed Passage	
Simultaneous Gap Term	12345678
Sequential Timing	1 3 5 7
Advance Walk Phases	
Delay Walk Phases	
External Recall	
Start-up Overlap Green	
Max Extension	
Inhibit Ped Reservice	
Semi-Actuated	
Start-up Overlap Yellow	
Start-up Vehicle Calls	12345678
Start-up Ped Calls	12345678

Specials <C+0+F=2>

- Flash to PE & PE Non-Lock**
 1 = EV A 5 = RR 1
 2 = EV B 6 = RR 2
 3 = EV C 7 = SE 1
 4 = EV D 8 = SE 2

- IC Select Flags**
 1 =
 2 = Modem
 3 = 7-Wire Slave
 4 = Flash / Free
 5 =
 6 = Simplex Master
 7 = 7-Wire Master
 8 = Offset Interrupter

	2	Row
Phase 1	10	1
Phase 2	10	2
Phase 3	10	3
Phase 4	10	4
Phase 5	10	5
Phase 6	10	6
Phase 7	10	7
Phase 8	10	8

Coordination Transition Minims
 <C+0+C=5>

Column Numbers ---->		Plan								
Row	Plan Name ---->	1	2	3	4	5	6	7	8	9
0	Cycle Length	0	72	96	120	144	110	110	110	110
1	Phase 1 - ForceOff	0	48	64	68	68	73	73	78	77
2	Phase 2 - ForceOff	0	0	0	0	0	0	0	0	0
3	Phase 3 - ForceOff	0	13	20	22	22	23	23	23	23
4	Phase 4 - ForceOff	0	36	43	45	45	52	52	52	51
5	Phase 5 - ForceOff	0	48	64	68	68	80	80	80	80
6	Phase 6 - ForceOff	0	0	0	0	0	0	0	0	0
7	Phase 7 - ForceOff	0	13	20	22	22	23	23	23	22
8	Phase 8 - ForceOff	0	36	43	45	45	52	52	52	51
9	Ring Offset	0	0	0	0	0	0	0	0	0
A	Offset 1	0	25	5	5	5	23	99	14	102
B	Offset 2	0	0	0	0	0	0	0	0	0
C	Offset 3	0	0	0	0	0	0	0	0	0
D	Perm 1 - End	0	0	0	0	0	5	5	5	5
E	Hold Release	0	255	255	255	255	255	255	255	255
F	Zone Offset	0	0	0	0	0	0	0	0	0

Coordination - Bank 1 <C+0+C=1>

0	Ped Adjustment	0	5	5	5	5	7	7	7	7
1	Perm 2 - Start	0	0	0	0	0	0	0	0	0
2	Perm 2 - End	0	0	0	0	0	0	0	0	0
3	Perm 3 - Start	0	0	0	0	0	0	0	0	0
4	Perm 3 - End	0	0	0	0	0	0	0	0	0
5	Reservice Time	0	0	0	0	0	0	0	0	0
6	Reservice Phases									
7										
8	Pretimed Phases									
9	Max Recall									
A	Perm 1 Veh Phase	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678
B	Perm 1 Ped Phase	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678
C	Perm 2 Veh Phase									
D	Perm 2 Ped Phase									
E	Perm 3 Veh Phase									
F	Perm 3 Ped Phase									

Coordination - Bank 2 <C+0+C=2>

Coord Extra
 1 = Programmed WALK Time for Sync Phases
 2 = Always Terminate Sync Phase Peds

Row	E	Row
0		0
1	Plan 1 - Sync	1
2	Plan 2 - Sync	2
3	Plan 3 - Sync	3
4	Plan 4 - Sync	4
5	Plan 5 - Sync	5
6	Plan 6 - Sync	6
7	Plan 7 - Sync	7
8	Plan 8 - Sync	8
9	Plan 9 - Sync	9
A	NEMA Sync	A
B	NEMA Hold	B
C		C
D		D
E	Coord Extra	E
F		F

Sync Phases <C+0+C=1>

Row	F	Row
0	Free Lag	0
1	Plan 1 - Lag	1
2	Plan 2 - Lag	2
3	Plan 3 - Lag	3
4	Plan 4 - Lag	4
5	Plan 5 - Lag	5
6	Plan 6 - Lag	6
7	Plan 7 - Lag	7
8	Plan 8 - Lag	8
9	Plan 9 - Lag	9
A	External Lag	A
B		B
C		C
D		D
E		E
F		F

Lag Phases <C+0+C=1>

Row	Column 9		Column A		Column B		Column C		Column D		Column E		Column F		Row
0	Spec. Funct. 1	0	NOT-3	0	Max 2	0	Pretimed	0	Set Monday	0	Dial 2 (7-Wire)	0	Sim Term	0	0
1	Spec. Funct. 2	0	NOT-4	0	System Det 1	0	Plan 1	0	Ext. Perm 1	0	Dial 3 (7-Wire)	0	EV-A	71	1
2	Spec. Funct. 3	0	OR-4 (a)	0	System Det 2	0	Plan 2	0	Ext. Perm 2	0	Offset 1 (7-Wire)	0	EV-B	72	2
3	Spec. Funct. 4	0	OR-4 (b)	0	System Det 3	0	Plan 3	0	Reserved	0	Offset 2 (7-Wire)	0	EV-C	73	3
4	NAND-3 (a)	0	OR-5 (a)	0	System Det 4	0	Plan 4	0	Set Clock	0	Offset 3 (7-Wire)	0	EV-D	74	4
5	NAND-3 (b)	0	OR-5 (b)	0	System Det 5	0	Plan 5	0	Stop Time	82	Free (7-Wire)	0	RR-1	51	5
6	NAND-4 (a)	0	OR-6 (a)	0	System Det 6	0	Plan 6	0	Flash Sense	81	Flash (7-Wire)	0	RR-2	52	6
7	NAND-4 (b)	0	OR-6 (b)	0	System Det 7	0	Plan 7	0	Manual Enable	0	Excl. Ped Omit	0	Spec. Event 1	0	7
8	OR-7 (a)	0	Fig 3 Diamond	0	System Det 8	0	Plan 8	0	Man. Advance	0	NOT-1	0	Spec. Event 2	0	8
9	OR-7 (b)	0	Fig 4 Diamond	0	Max Inhibit (nema)	0	Plan 9	0	External Alarm	0	NOT-2	0	External Lag	0	9
A	OR-7 (c)	0	AND-4 (a)	0	Force A (nema)	0	DELAY-A	0	Phase Bank 2	0	OR-1 (a)	0	AND-1 (a)	0	A
B	OR-7 (d)	0	AND-4 (b)	0	Force B (nema)	0	DELAY-B	0	Phase Bank 3	0	OR-1 (b)	0	AND-1 (b)	0	B
C	OR-8 (a)	0	NAND-1 (a)	0	C.N.A. (nema)	0	DELAY-C	0	Overlap Set 2	0	OR-2 (a)	0	AND-2 (a)	0	C
D	OR-8 (b)	0	NAND-1 (b)	0	Hold (nema)	0	DELAY-D	0	Overlap Set 3	0	OR-2 (b)	0	AND-2 (b)	0	D
E	OR-8 (c)	0	NAND-2 (a)	0	Max Recall	0	DELAY-E	0	Detector Set 2	0	OR-3 (a)	0	AND-3 (a)	0	E
F	OR-8 (d)	0	NAND-2 (b)	0	Min Recall	0	DELAY-F	0	Detector Set 3	0	OR-3 (b)	0	AND-3 (b)	0	F

Assignable Inputs

<C+0+E=126>

Row	Column 9		Column A		Column B		Column C		Column D		Column E		Column F		Row
0	Phase ON - 1	0	Preempt Fail	0	Flasher 0	0	Free	0	NOT-1	0	TOD Out 1	0	Dial 2 (7-Wire)	0	0
1	Phase ON - 2	0	Sp Evnt Out 1	0	Flasher 1	0	Plan 1	0	OR-1	0	TOD Out 2	0	Dial 3 (7-Wire)	0	1
2	Phase ON - 3	0	Sp Evnt Out 2	0	Fast Flasher	0	Plan 2	0	OR-2	0	TOD Out 3	0	Offset 1 (7-Wire)	0	2
3	Phase ON - 4	0	Sp Evnt Out 3	0	Fig 3 Diamond	0	Plan 3	0	OR-3	0	TOD Out 4	0	Offset 2 (7-Wire)	0	3
4	Phase ON - 5	0	Sp Evnt Out 4	0	Fig 4 Diamond	0	Plan 4	0	AND-1	0	TOD Out 5	0	Offset 3 (7-Wire)	0	4
5	Phase ON - 6	0	Sp Evnt Out 5	0			Plan 5	0	AND-2	0	TOD Out 6	0	Free (7-Wire)	0	5
6	Phase ON - 7	0	Sp Evnt Out 6	0			Plan 6	0	AND-3	0	TOD Out 7	0	Flash (7-Wire)	0	6
7	Phase ON - 8	0	Sp Evnt Out 7	0			Plan 7	0	NOT-2	0	TOD Out 8	0	Preempt	0	7
8	Ph. Check - 1	0	Sp Evnt Out 8	0	NOT-3	0	Plan 8	0	EV-A	0	Adv. Warn - 1	0	Low Priority A	0	8
9	Ph. Check - 2	0			NOT-4	0	Plan 9	0	EV-B	0	Adv. Warn - 2	0	Low Priority B	0	9
A	Ph. Check - 3	0	Detector Fail	0	OR-4	0	Spec. Funct. 3	0	EV-C	0	DELAY-A	0	Low Priority C	0	A
B	Ph. Check - 4	0	Spec. Funct. 1	0	OR-5	0	Spec. Funct. 4	0	EV-D	0	DELAY-B	0	Low Priority D	0	B
C	Ph. Check - 5	0	Spec. Funct. 2	0	OR-6	0	NAND-3	0	RR-1	0	DELAY-C	0			C
D	Ph. Check - 6	0	Central Control	0	AND-4	0	NAND-4	0	RR-2	0	DELAY-D	0			D
E	Ph. Check - 7	0	Excl. Ped DW	0	NAND-1	0	OR-7	0	Spec. Event 1	0	DELAY-E	0			E
F	Ph. Check - 8	0	Excl. Ped WK	0	NAND-2	0	OR-8	0	Spec. Event 2	0	DELAY-F	0			F

Assignable Outputs

<C+0+E=127>

Row	Phase Names ---->	Phase							
		1	2	3	4	5	6	7	8
0	Ped Walk	0	0	0	0	0	0	0	0
1	Ped FDW	0	0	0	0	0	0	0	0
2	Min Green	0	0	0	0	0	0	0	0
3	Type 3 Disconnect	0	0	0	0	0	0	0	0
4	Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Veh Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	Max Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	Max Limit	0	0	0	0	0	0	0	0
9	Max Limit 2	0	0	0	0	0	0	0	0
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	PE Min Ped FDW	0	0	0	0	0	0	0	0
C	Cond Serv Check	0	0	0	0	0	0	0	0
D	Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
F	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Phase Timing - Bank 2 <C+0+F=2>

Row	Phase Names ---->	Phase							
		1	2	3	4	5	6	7	8
0	Ped Walk	0	0	0	0	0	0	0	0
1	Ped FDW	0	0	0	0	0	0	0	0
2	Min Green	0	0	0	0	0	0	0	0
3	Type 3 Disconnect	0	0	0	0	0	0	0	0
4	Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Veh Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	Max Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	Max Limit	0	0	0	0	0	0	0	0
9	Max Limit 2	0	0	0	0	0	0	0	0
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	PE Min Ped FDW	0	0	0	0	0	0	0	0
C	Cond Serv Check	0	0	0	0	0	0	0	0
D	Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
F	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Phase Timing - Bank 3 <C+0+F=3>

	9	A	B	C	D
Phase 1	0	0	0	0	0.0
Phase 2	0	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	0	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	0	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	0	0	0	0	0.0
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing

	9	A	B	C	D
Phase 1	0	0	0	0	0.0
Phase 2	0	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	0	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	0	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	0	0	0	0	0.0
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing

Transition Type
 0.X = Shortway
 1.X = Lengthen
 X.1 thru X.4 =
 Number of
 cycles when
 lengthing

Transition Type	0.3	<C/5+1+9>
-----------------	-----	-----------

TBC Transition

Lag Hold Phases		<C/5+1+A>
-----------------	--	-----------

Coordinated Lag Hold Phases

Daylight Savings
 Date
 If set to all zeros,
 standard dates
 will be used.

Begin Month	0	<C/5+2+A>
Begin Week	0	<C/5+2+B>
End Month	0	<C/5+2+C>
End Week	0	<C/5+2+D>

Daylight Savings Time

Time B4 Yellow	0.0	<F/1+C+E>
Phase Number	0	<F/1+C+F>

Advance Warning Beacon - Sign 1

Time B4 Yellow	0.0	<F/1+D+E>
Phase Number	0	<F/1+D+F>

Advance Warning Beacon - Sign 2

Column Numbers ---->		0	1	2	3	1	3
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0		39	45 7	2	123	2.0	1.5
1		40	45 7	6	123	0.0	0.0
2		41	45 7	4	123	0.0	0.0
3		42	45 7	8	123	0.0	0.0
4		43	45 7	2	123	0.0	0.0
5		44	45 7	6	123	0.0	0.0
6		45	45 7	4	123	2.0	1.5
7		46	45 7	8	123	10.0	0.0
8		47	45 7	2	123	3.0	1.5
9		48	45 7	6	123	2.0	1.5
A		49	45 7	4	123	0.0	0.0
B		50	45 7	8	123	0.0	0.0
C		55	45 7	5	123	0.0	0.0
D		56	45 7	1	123	0.0	0.0
E		57	45 7	7	123	0.0	0.0
F		58	45 7	3	123	0.0	0.0

Column Numbers ---->		4	5	6	7	2	4
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0		59	45 7	5	123	2.0	1.5
1		60	45 7	1	123	0.0	0.0
2		61	45 7	7	123	0.0	0.0
3		62	45 7	3	123	0.0	0.0
4		63	45 7	2	123	0.0	0.0
5		64	45 7	6	123	0.0	0.0
6		65	45 7	4	123	2.0	1.5
7		66	45 7	8	123	10.0	0.0
8		67	2	2	123	0.0	0.0
9		68	2	6	123	10.0	0.0
A		69	2	4	123	0.0	0.0
B		70	2	8	123	0.0	0.0
C		76	45 7	2	123	0.0	0.0
D		77	45 7	6	123	0.0	0.0
E		78	45 7	4	123	0.0	0.0
F		79	45 7	8	123	0.0	0.0

Detector Assignments <C+0+E=126>

Detector Attributes

- 1 = Full Time Delay
- 2 = Ped Call
- 3 =
- 4 = Count
- 5 = Extension
- 6 = Type 3
- 7 = Calling
- 8 = Alternate

Det. Assignments

- 1 = Det. Set 1
- 2 = Det. Set 2
- 3 = Det. Set 3
- 4 =
- 5 =
- 6 = Failure - Min Recall
- 7 = Failure - Max Recall
- 8 = Report on Failure

<C+0+D=0>

Column Numbers ---->		Ped / Phase / Overlap								Row
		1	2	3	4	5	6	7	8	
Walk		0	0	0	0	0	0	0	0	0
Don't Walk		0	0	0	0	0	0	0	0	1
Phase Green		0	0	0	0	0	0	0	0	2
Phase Yellow		0	0	0	0	0	0	0	0	3
Phase Red		0	0	0	0	0	0	0	0	4
Overlap Green		0	0	0	0	0	0	0	0	5
Overlap Yellow		0	0	0	0	0	0	0	0	6
Overlap Red		0	0	0	0	0	0	0	0	7

Redirect Phase Outputs <C+0+E=127>

Cabinet Type | 0 | <E/125+D+0>

Enable Redirection
(Enable Redirection = 30)

Max OFF (minutes) | 20 | <D/0+0+1>

Max ON (minutes) | 7 | <D/0+0+2>

Detector Failure Monitor

Disable Alarms

- 1 = Stop Time
- 2 = Flash Sense
- 3 = Keyboard Entry
- 4 = Manual Plan
- 5 = Police Control
- 6 = External Alarm
- 7 = Detector Failure
- 8 =

	B	Row
DELAY-A	0	A
DELAY-B	0	B
DELAY-C	0	C
DELAY-D	0	D
DELAY-E	0	E
DELAY-F	0	F

Delay Logic Times
<C+0+D=0> (seconds)

Omit Alarm | | <C/5+F+0>

Disable Alarm Reporting

Row	Time	Plan	Offset	Day of Week
0	00:00	E	A	1234567
1	07:00	6	A	23456
2	10:00	E	A	23456
3	10:30	7	A	23456
4	13:30	E	A	23456
5	14:00	8	A	23456
6	18:30	E	A	23456
7	10:30	9	A	1 7
8	16:00	E	A	1 7
9	00:00	0	0	
A	00:00	0	0	
B	00:00	0	0	
C	00:00	0	0	
D	00:00	0	0	
E	00:00	0	0	
F	00:00	0	0	

TOD Coordination <C+0+9=0.1>
(Bank 1)

Time	Function	Day of Week
00:00	0	
00:00	0	
00:00	0	
00:00	0	
00:00	0	
00:00	0	
00:00	0	
00:00	0	
00:00	0	
00:00	0	
00:00	0	
00:00	0	
00:00	0	
00:00	0	
00:00	0	
00:00	0	

TOD Function <C+0+7=0.1>

Column 4
Phases/Bits

<C+0+E=27>

Day	Year	Month	Holiday Type
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	

Holiday Dates <C+0+8=1.1>
(Bank 1)

Time	Plan	Offset	Holiday Type
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	

Holiday Events <C+0+9=1.1>
(Bank 1)

- T.O.D. Functions
 0 =
 1 = Red Lock
 2 = Yellow Lock
 3 = Veh Min Recall
 4 = Ped Recall
 5 =
 6 = Rest In Walk
 7 = Red Rest
 8 = Double Entry
 9 = Veh Max Recall
 A = Veh Soft Recall
 B = Maximum 2
 C = Conditional Service
 D = Free Lag Phases
 E = Bit 1 - Local Override
 Bit 4 - Disable Detector Monitor
 OFF Monitor
 Bit 5 - Disable Low Priority Preempt
 Bit 7 - Detector Count Monitor
 Bit 8 - Real Time Split Monitor
 F = Output Bits 1 thru 8

- Plan Select
 1 thru 9 = Coordination
 Plan 1 thru 9
 14 or E = Free
 15 or F = Flash

- Offset Select
 A = Offset A
 B = Offset B
 C = Offset C

- Month Select
 1 = January
 2 = February
 3 = March
 4 = April
 5 = May
 6 = June
 7 = July
 8 = August
 9 = September
 A = October
 B = November
 C = December

Row	Time	Plan	Offset	Day of Week
0	00:00	0	0	
1	00:00	0	0	
2	00:00	0	0	
3	00:00	0	0	
4	00:00	0	0	
5	00:00	0	0	
6	00:00	0	0	
7	00:00	0	0	
8	00:00	0	0	
9	00:00	0	0	
A	00:00	0	0	
B	00:00	0	0	
C	00:00	0	0	
D	00:00	0	0	
E	00:00	0	0	
F	00:00	0	0	

TOD Coordination <C+0+9=0.2>
(Bank 2)

Time	Function	Holiday Type
00:00	0	
00:00	0	
00:00	0	
00:00	0	
00:00	0	
00:00	0	
00:00	0	
00:00	0	
00:00	0	
00:00	0	
00:00	0	
00:00	0	
00:00	0	
00:00	0	
00:00	0	
00:00	0	

Holiday TOD Function <C+0+7=0.2>

Column 4
Phases/Bits

<C+0+E=28>

Day	Year	Month	Holiday Type
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	

Holiday Dates <C+0+8=1.2>
(Bank 2)

Time	Plan	Offset	Holiday Type
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	

Holiday Events <C+0+9=1.2>
(Bank 2)

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Special Event Schedule -- Table 1

<C+0+E=27>

Notes: _____

0 <E/27+5+F>
Limited Service Interval

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Special Event Schedule -- Table 2

<C+0+E=28>

Notes: _____

0 <E/28+5+F>
Limited Service Interval

Min Time (seconds) | 2 | <F/1+0+8>
Min Green Before PE Force Off

Max Time (minutes) | 2 | <F/1+0+9>
Max Preempt Time Before Failure

Min Time (seconds) | 0 | <F/1+0+A>
Min Time Between Same Preempts
 (Does Not Apply To Railroad Preempt)

Low Pri. Channel | | <E/125+C+8>
Disable Low Priority Channel

- Low Priority
 1 = Channel A
 2 = Channel B
 3 = Channel C
 4 = Channel D

Delay Time (seconds) | 0 | <F/1+A+D>
Bus Delay

Max Time (seconds) | 0 | <F/1+A+E>
Max Early Green

Max Time (seconds) | 0 | <F/1+A+F>
Max Green Extension

Row	Time	Headway	Direction	Day of Week
0	00 : 00	0	0	_____
1	00 : 00	0	0	_____
2	00 : 00	0	0	_____
3	00 : 00	0	0	_____
4	00 : 00	0	0	_____
5	00 : 00	0	0	_____
6	00 : 00	0	0	_____
7	00 : 00	0	0	_____
8	00 : 00	0	0	_____
9	00 : 00	0	0	_____
A	00 : 00	0	0	_____
B	00 : 00	0	0	_____
C	00 : 00	0	0	_____
D	00 : 00	0	0	_____
E	00 : 00	0	0	_____
F	00 : 00	0	0	_____

- Headway Time
 (minutes)
 1 thru 9 = 1 thru 9
 A = 10
 B = 11
 C = 12
 D = 13
 E = 14
 F = 15

Headway <C+0+9=2.1>

Low Priority Preemption (Bus Priority)

Only available with *Program 233RV2.B* (and above)

Note: Also see "Time of Day Functions", Function E, Bit 5 (Disable Low Priority)

INTERSECTION: 229 Auto Park Place/Main

Group Assignment: **NONE**
 Field Master Assignment: **NONE**
 System Reference Number: **229**

N/S Street Name: **Auto Park PI**
 E/W Street Name: **Main St**

Last Database Change: **5/20/2021 9:34**

Change Record					
Change	By	Date	Change	By	Date

Notes: _____

Manual Plan
 0 = Automatic
 1-9 = Plan 1-9
 14 = Free
 15 = Flash

Manual Offset
 0 = Automatic
 1 = Offset A
 2 = Offset B
 3 = Offset C

Drop Number	1	<C/0+0+0>
Zone Number	1	<C/0+0+1>
Area Number	0	<C/0+0+2>
Area Address	145	<C/0+0+3>
QuicNet Channel	P:8018:10.242.20	(QuicNet)

Manual Plan		<C/0+A+1>
Manual Offset		<C/0+B+1>

Flash Start	0	<F/1+0+E>
Red Revert	3.0	<F/1+0+F>
All Red Start	5.0	<F/1+C+0>

Exclusive Walk	0	<F/1+0+0>
Exclusive FDW	0	<F/1+0+1>
All Red Clear	0.0	<F/1+0+2>

Communication Addresses

Manual Selection

Start / Revert Times

Exclusive Ped Phase

(Outputs specified in Assignable
 Outputs at E/127+A+E & F)

Row	Column Numbers ---->	Phase							
		1	2	3	4	5	6	7	8
0	Ped Walk	0	7	0	0	0	7	0	7
1	Ped FDW	0	17	0	0	0	18	0	35
2	Min Green	4	10	0	7	4	10	0	7
3	Type 3 Disconnect	0	0	0	0	0	0	0	0
4	Added per Vehicle	0.0	1.2	0.0	0.0	0.0	1.2	0.0	0.0
5	Veh Extension	2.0	5.0	0.0	3.0	2.0	5.0	0.0	3.0
6	Max Gap	2.0	5.8	0.0	3.0	2.0	5.8	0.0	3.0
7	Min Gap	2.0	2.0	0.0	3.0	2.0	2.0	0.0	3.0
8	Max Limit	24	50	0	34	24	50	0	34
9	Max Limit 2	0	0	0	0	0	0	0	0
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	PE Min Ped FDW	0	3	0	0	0	3	0	4
C	Cond Serv Check	0	0	0	0	0	0	0	0
D	Reduce Every	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0
E	Yellow Change	3.2	4.7	0.0	3.6	3.2	4.7	0.0	3.6
F	Red Clear	1.0	1.3	0.0	1.0	1.0	1.3	0.0	1.0

Phase Timing - Bank 1 <C+0+F=1>

	9	A	B	C	D
Phase 1	0	0	0	0	0.0
Phase 2	20	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	20	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	20	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	20	0	0	0	0.0

Max Initial
 Alternate Walk
 Alternate FDW
 Alternate Initial
 Alternate Extension

Alternate Timing <C+0+F=1>

	E
RR-1 Delay	0
RR-1 Clear	0
EV-A Delay	0
EV-A Clear	0
EV-B Delay	0
EV-B Clear	0
EV-C Delay	0
EV-C Clear	0
EV-D Delay	0
EV-D Clear	0
RR-2 Delay	0
RR-2 Clear	0
View EV Delay	---
View EV Clear	---
View RR Delay	---
View RR Clear	---

Preempt Timing

	F	Row
Permit	12_456_8	0
Red Lock	_____	1
Yellow Lock	_____	2
Min Recall	2_6_	3
Ped Recall	_____	4
View Set Peds	-----	5
Rest In Walk	_____	6
Red Rest	_____	7
Dual Entry	4_8	8
Max Recall	_____	9
Soft Recall	_____	A
Max 2	_____	B
Cond. Service	_____	C
Man Cntrl Calls	_____	D
Yellow Start	_____	E
First Phases	2_6_	F

Phase Functions <C+0+F=1>

		Overlap							
Column Numbers ---->		1	2	3	4	5	6	7	8
Row	Overlap Name ---->								
0	Load Switch Number	0	0	0	0	0	0	0	0
1	Veh Set 1 - Phases								
2	Veh Set 2 - Phases								
3	Veh Set 3 - Phases								
4	Neg Veh Phases								
5	Neg Ped Phases								
6	Green Omit Phases								
7	Green Clear Omit Phs.								
8									
9									
A									
B									
C									
D	Green Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
F	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Overlap Assignments <C+0+E=29>

- Extra 1 Flags**
 1 = TBC Type 1
 2 = NEMA Ext. Coord
 3 = Auto Daylight Savings
 4 = Solid FDW on EV
 5 = Extended Status
 6 = International Ped
 7 = Flash - Clear Outputs
 8 = Split Ring

- Extra 2 Flags**
 1 = AWB During Initial
 2 = LMU Installed
 3 = Disable Min Walk
 4 = QuicNet/4 System
 5 = Ignore P/P on EV
 6 =
 7 = Allow QuicNet PE
 8 =

	C	Row
EV-A	0	0
EV-B	0	1
EV-C	0	2
EV-D	0	3
RR-1 *	---	4
RR-2 *	---	5
SE-1	0	6
SE-2	0	7

Preempt Priority
 <C+0+E=125>
 (* RR-1 is always Highest, and RR-2 is always Second Highest)

Row	Column Numbers ---->	E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Flash to PE Circuits	
6	Flash Entry Phases	
7	Disable Yellow Range	
8	Disable Ovp Yel Range	
9	Overlap Yellow Flash	
A	EV-A Phases	2 5
B	EV-B Phases	4
C	EV-C Phases	1 6
D	EV-D Phases	8
E	Extra 1 Config. Bits	1 3 5
F	IC Select (Interconnect)	2

Configuration <C+0+E=125>

	F
Ext. Permit 1 Phases	
Ext. Permit 2 Phases	
Exclusive Ped Assign	
Preempt Non-Lock	
Ped for 2P Output	2
Ped for 6P Output	6
Ped for 4P Output	
Ped for 8P Output	8
Yellow Flash Phases	
Low Priority A Phases	
Low Priority B Phases	
Low Priority C Phases	
Low Priority D Phases	
Restricted Phases	
Extra 2 Config. Bits	3

Configuration <C+0+E=125>

	F
Fast Green Flash Phase	
Green Flash Phases	
Flashing Walk Phases	
Guaranteed Passage	
Simultaneous Gap Term	12345678
Sequential Timing	
Advance Walk Phases	
Delay Walk Phases	
External Recall	
Start-up Overlap Green	
Max Extension	
Inhibit Ped Reservice	
Semi-Actuated	
Start-up Overlap Yellow	
Start-up Vehicle Calls	12345678
Start-up Ped Calls	12345678

Specials <C+0+F=2>

- Flash to PE & PE Non-Lock**
 1 = EV A 5 = RR 1
 2 = EV B 6 = RR 2
 3 = EV C 7 = SE 1
 4 = EV D 8 = SE 2

- IC Select Flags**
 1 =
 2 = Modem
 3 = 7-Wire Slave
 4 = Flash / Free
 5 =
 6 = Simplex Master
 7 = 7-Wire Master
 8 = Offset Interrupter

	2	Row
Phase 1	5	1
Phase 2	5	2
Phase 3	5	3
Phase 4	5	4
Phase 5	5	5
Phase 6	5	6
Phase 7	5	7
Phase 8	5	8

Coordination Transition Minims
 <C+0+C=5>

Column Numbers ---->		Plan								
Row	Plan Name ---->	1	2	3	4	5	6	7	8	9
0	Cycle Length	84	96	108	0	0	110	110	110	110
1	Phase 1 - ForceOff	41	49	55	0	0	62	62	57	62
2	Phase 2 - ForceOff	0	0	0	0	0	0	0	0	0
3	Phase 3 - ForceOff	0	0	0	0	0	0	0	0	0
4	Phase 4 - ForceOff	20	26	30	0	0	37	37	32	37
5	Phase 5 - ForceOff	41	49	55	0	0	62	62	52	62
6	Phase 6 - ForceOff	0	0	0	0	0	0	0	0	0
7	Phase 7 - ForceOff	0	0	0	0	0	0	0	0	0
8	Phase 8 - ForceOff	20	26	30	0	0	37	37	32	37
9	Ring Offset	0	0	0	0	0	0	0	0	0
A	Offset 1	10	10	5	0	0	39	5	26	109
B	Offset 2	0	0	0	0	0	0	0	0	0
C	Offset 3	0	0	0	0	0	0	0	0	0
D	Perm 1 - End	0	0	0	0	0	5	5	5	5
E	Hold Release	255	255	255	0	0	255	255	255	255
F	Zone Offset	0	0	0	0	0	0	0	0	0

Coordination - Bank 1 <C+0+C=1>

0	Ped Adjustment	9	6	4	0	0	6	6	9	6
1	Perm 2 - Start	0	0	0	0	0	0	0	0	0
2	Perm 2 - End	0	0	0	0	0	0	0	0	0
3	Perm 3 - Start	0	0	0	0	0	0	0	0	0
4	Perm 3 - End	0	0	0	0	0	0	0	0	0
5	Reservice Time	0	0	0	0	0	0	0	0	0
6	Reservice Phases									
7										
8	Pretimed Phases									
9	Max Recall									
A	Perm 1 Veh Phase	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678
B	Perm 1 Ped Phase	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678
C	Perm 2 Veh Phase									
D	Perm 2 Ped Phase									
E	Perm 3 Veh Phase									
F	Perm 3 Ped Phase									

Coordination - Bank 2 <C+0+C=2>

Coord Extra
 1 = Programmed WALK Time for Sync Phases
 2 = Always Terminate Sync Phase Peds

Row	E	Row
0		0
1	Plan 1 - Sync	2 6
2	Plan 2 - Sync	2 6
3	Plan 3 - Sync	2 6
4	Plan 4 - Sync	
5	Plan 5 - Sync	
6	Plan 6 - Sync	2 6
7	Plan 7 - Sync	2 6
8	Plan 8 - Sync	2 6
9	Plan 9 - Sync	2 6
A	NEMA Sync	
B	NEMA Hold	
C		
D		
E	Coord Extra	
F		

Sync Phases <C+0+C=1>

Row	F	Row
0	Free Lag	2 4 6 8
1	Plan 1 - Lag	2 4 6 8
2	Plan 2 - Lag	2 4 6 8
3	Plan 3 - Lag	2 4 6 8
4	Plan 4 - Lag	
5	Plan 5 - Lag	
6	Plan 6 - Lag	2 4 6 8
7	Plan 7 - Lag	2 4 6 8
8	Plan 8 - Lag	2 4 6 8
9	Plan 9 - Lag	2 4 6 8
A	External Lag	
B		
C		
D		
E		
F		

Lag Phases <C+0+C=1>

Row	Column 9		Column A		Column B		Column C		Column D		Column E		Column F		Row
0	Spec. Funct. 1	0	NOT-3	0	Max 2	0	Pretimed	0	Set Monday	0	Dial 2 (7-Wire)	0	Sim Term	0	0
1	Spec. Funct. 2	0	NOT-4	0	System Det 1	0	Plan 1	0	Ext. Perm 1	0	Dial 3 (7-Wire)	0	EV-A	71	1
2	Spec. Funct. 3	0	OR-4 (a)	0	System Det 2	0	Plan 2	0	Ext. Perm 2	0	Offset 1 (7-Wire)	0	EV-B	72	2
3	Spec. Funct. 4	0	OR-4 (b)	0	System Det 3	0	Plan 3	0	Reserved	0	Offset 2 (7-Wire)	0	EV-C	73	3
4	NAND-3 (a)	0	OR-5 (a)	0	System Det 4	0	Plan 4	0	Set Clock	0	Offset 3 (7-Wire)	0	EV-D	74	4
5	NAND-3 (b)	0	OR-5 (b)	0	System Det 5	0	Plan 5	0	Stop Time	82	Free (7-Wire)	0	RR-1	51	5
6	NAND-4 (a)	0	OR-6 (a)	0	System Det 6	0	Plan 6	0	Flash Sense	81	Flash (7-Wire)	0	RR-2	52	6
7	NAND-4 (b)	0	OR-6 (b)	0	System Det 7	0	Plan 7	0	Manual Enable	0	Excl. Ped Omit	0	Spec. Event 1	0	7
8	OR-7 (a)	0	Fig 3 Diamond	0	System Det 8	0	Plan 8	0	Man. Advance	0	NOT-1	0	Spec. Event 2	0	8
9	OR-7 (b)	0	Fig 4 Diamond	0	Max Inhibit (nema)	0	Plan 9	0	External Alarm	0	NOT-2	0	External Lag	0	9
A	OR-7 (c)	0	AND-4 (a)	0	Force A (nema)	0	DELAY-A	0	Phase Bank 2	0	OR-1 (a)	0	AND-1 (a)	0	A
B	OR-7 (d)	0	AND-4 (b)	0	Force B (nema)	0	DELAY-B	0	Phase Bank 3	0	OR-1 (b)	0	AND-1 (b)	0	B
C	OR-8 (a)	0	NAND-1 (a)	0	C.N.A. (nema)	0	DELAY-C	0	Overlap Set 2	0	OR-2 (a)	0	AND-2 (a)	0	C
D	OR-8 (b)	0	NAND-1 (b)	0	Hold (nema)	0	DELAY-D	0	Overlap Set 3	0	OR-2 (b)	0	AND-2 (b)	0	D
E	OR-8 (c)	0	NAND-2 (a)	0	Max Recall	0	DELAY-E	0	Detector Set 2	0	OR-3 (a)	0	AND-3 (a)	0	E
F	OR-8 (d)	0	NAND-2 (b)	0	Min Recall	0	DELAY-F	0	Detector Set 3	0	OR-3 (b)	0	AND-3 (b)	0	F

Assignable Inputs

<C+0+E=126>

Row	Column 9		Column A		Column B		Column C		Column D		Column E		Column F		Row
0	Phase ON - 1	0	Preempt Fail	0	Flasher 0	0	Free	0	NOT-1	0	TOD Out 1	0	Dial 2 (7-Wire)	0	0
1	Phase ON - 2	0	Sp Evnt Out 1	0	Flasher 1	0	Plan 1	0	OR-1	0	TOD Out 2	0	Dial 3 (7-Wire)	0	1
2	Phase ON - 3	0	Sp Evnt Out 2	0	Fast Flasher	0	Plan 2	0	OR-2	0	TOD Out 3	0	Offset 1 (7-Wire)	0	2
3	Phase ON - 4	0	Sp Evnt Out 3	0	Fig 3 Diamond	0	Plan 3	0	OR-3	0	TOD Out 4	0	Offset 2 (7-Wire)	0	3
4	Phase ON - 5	0	Sp Evnt Out 4	0	Fig 4 Diamond	0	Plan 4	0	AND-1	0	TOD Out 5	0	Offset 3 (7-Wire)	0	4
5	Phase ON - 6	0	Sp Evnt Out 5	0			Plan 5	0	AND-2	0	TOD Out 6	0	Free (7-Wire)	0	5
6	Phase ON - 7	0	Sp Evnt Out 6	0			Plan 6	0	AND-3	0	TOD Out 7	0	Flash (7-Wire)	0	6
7	Phase ON - 8	0	Sp Evnt Out 7	0			Plan 7	0	NOT-2	0	TOD Out 8	0	Preempt	0	7
8	Ph. Check - 1	0	Sp Evnt Out 8	0	NOT-3	0	Plan 8	0	EV-A	0	Adv. Warn - 1	0	Low Priority A	0	8
9	Ph. Check - 2	0			NOT-4	0	Plan 9	0	EV-B	0	Adv. Warn - 2	0	Low Priority B	0	9
A	Ph. Check - 3	0	Detector Fail	0	OR-4	0	Spec. Funct. 3	0	EV-C	0	DELAY-A	0	Low Priority C	0	A
B	Ph. Check - 4	0	Spec. Funct. 1	0	OR-5	0	Spec. Funct. 4	0	EV-D	0	DELAY-B	0	Low Priority D	0	B
C	Ph. Check - 5	0	Spec. Funct. 2	0	OR-6	0	NAND-3	0	RR-1	0	DELAY-C	0			C
D	Ph. Check - 6	0	Central Control	0	AND-4	0	NAND-4	0	RR-2	0	DELAY-D	0			D
E	Ph. Check - 7	0	Excl. Ped DW	0	NAND-1	0	OR-7	0	Spec. Event 1	0	DELAY-E	0			E
F	Ph. Check - 8	0	Excl. Ped WK	0	NAND-2	0	OR-8	0	Spec. Event 2	0	DELAY-F	0			F

Assignable Outputs

<C+0+E=127>

Row	Phase Names ---->	Phase							
		1	2	3	4	5	6	7	8
0	Ped Walk	0	0	0	0	0	0	0	0
1	Ped FDW	0	0	0	0	0	0	0	0
2	Min Green	0	0	0	0	0	0	0	0
3	Type 3 Disconnect	0	0	0	0	0	0	0	0
4	Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Veh Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	Max Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	Max Limit	0	0	0	0	0	0	0	0
9	Max Limit 2	0	0	0	0	0	0	0	0
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	PE Min Ped FDW	0	0	0	0	0	0	0	0
C	Cond Serv Check	0	0	0	0	0	0	0	0
D	Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
F	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Phase Timing - Bank 2 <C+0+F=2>

Row	Phase Names ---->	Phase							
		1	2	3	4	5	6	7	8
0	Ped Walk	0	0	0	0	0	0	0	0
1	Ped FDW	0	0	0	0	0	0	0	0
2	Min Green	0	0	0	0	0	0	0	0
3	Type 3 Disconnect	0	0	0	0	0	0	0	0
4	Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Veh Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	Max Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	Max Limit	0	0	0	0	0	0	0	0
9	Max Limit 2	0	0	0	0	0	0	0	0
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	PE Min Ped FDW	0	0	0	0	0	0	0	0
C	Cond Serv Check	0	0	0	0	0	0	0	0
D	Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
F	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Phase Timing - Bank 3 <C+0+F=3>

	9	A	B	C	D
Phase 1	0	0	0	0	0.0
Phase 2	0	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	0	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	0	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	0	0	0	0	0.0
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing

	9	A	B	C	D
Phase 1	0	0	0	0	0.0
Phase 2	0	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	0	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	0	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	0	0	0	0	0.0
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing

Transition Type
 0.X = Shortway
 1.X = Lengthen
 X.1 thru X.4 =
 Number of
 cycles when
 lengthing

Transition Type	0.3	<C/5+1+9>
-----------------	-----	-----------

TBC Transition

Lag Hold Phases		<C/5+1+A>
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Coordinated Lag Hold Phases

Daylight Savings
 Date
 If set to all zeros,
 standard dates
 will be used.

Begin Month	0	<C/5+2+A>
Begin Week	0	<C/5+2+B>
End Month	0	<C/5+2+C>
End Week	0	<C/5+2+D>

Daylight Savings Time

Time B4 Yellow	0.0	<F/1+C+E>
Phase Number	0	<F/1+C+F>

Advance Warning Beacon - Sign 1

Time B4 Yellow	0.0	<F/1+D+E>
Phase Number	0	<F/1+D+F>

Advance Warning Beacon - Sign 2

Column Numbers ---->		0	1	2	3	1	3
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0		39	45 7	2	123	2.0	1.5
1		40	45 7	6	123	0.0	0.0
2		41	45 7	4	123	0.0	0.0
3		42	45 7	8	123	0.0	0.0
4		43	45 7	2	123	0.0	0.0
5		44	45 7	6	123	0.0	0.0
6		45	45 7	4	123	0.0	0.0
7		46	45 7	8	123	0.0	0.0
8		47	45 7	2	123	0.0	0.0
9		48	45 7	6	123	0.0	0.0
A		49	45 7	4	123	0.0	0.0
B		50	45 7	8	123	8.0	0.0
C		55	45 7	5	123	0.0	0.0
D		56	45 7	1	123	0.0	0.0
E		57	45 7	7	123	0.0	0.0
F		58	45 7	3	123	0.0	0.0

Column Numbers ---->		4	5	6	7	2	4
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0		59	45 7	5	123	2.0	1.5
1		60	45 7	1	123	0.0	0.0
2		61	45 7	7	123	0.0	0.0
3		62	45 7	3	123	0.0	0.0
4		63	45 7	2	123	0.0	0.0
5		64	45 7	6	123	0.0	0.0
6		65	45 7	4	123	0.0	0.0
7		66	45 7	8	123	0.0	0.0
8		67	2	2	123	0.0	0.0
9		68	2	6	123	0.0	0.0
A		69	2	4	123	0.0	0.0
B		70	2	8	123	8.0	0.0
C		76	45 7	2	123	0.0	0.0
D		77	45 7	6	123	0.0	0.0
E		78	45 7	4	123	0.0	0.0
F		79	45 7	8	123	0.0	0.0

Detector Assignments <C+0+E=126>

Detector Attributes

- 1 = Full Time Delay
- 2 = Ped Call
- 3 =
- 4 = Count
- 5 = Extension
- 6 = Type 3
- 7 = Calling
- 8 = Alternate

Det. Assignments

- 1 = Det. Set 1
- 2 = Det. Set 2
- 3 = Det. Set 3
- 4 =
- 5 =
- 6 = Failure - Min Recall
- 7 = Failure - Max Recall
- 8 = Report on Failure

<C+0+D=0>

Column Numbers ---->		Ped / Phase / Overlap								Row
		1	2	3	4	5	6	7	8	
Walk		0	0	0	0	0	0	0	0	0
Don't Walk		0	0	0	0	0	0	0	0	1
Phase Green		0	0	0	0	0	0	0	0	2
Phase Yellow		0	0	0	0	0	0	0	0	3
Phase Red		0	0	0	0	0	0	0	0	4
Overlap Green		0	0	0	0	0	0	0	0	5
Overlap Yellow		0	0	0	0	0	0	0	0	6
Overlap Red		0	0	0	0	0	0	0	0	7

Redirect Phase Outputs <C+0+E=127>

Cabinet Type | 0 <E/125+D+0>

Enable Redirection
(Enable Redirection = 30)

Max OFF (minutes) | 20 <D/0+0+1>

Max ON (minutes) | 7 <D/0+0+2>

Detector Failure Monitor

Disable Alarms

- 1 = Stop Time
- 2 = Flash Sense
- 3 = Keyboard Entry
- 4 = Manual Plan
- 5 = Police Control
- 6 = External Alarm
- 7 = Detector Failure
- 8 =

	B	Row
DELAY-A	0	A
DELAY-B	0	B
DELAY-C	0	C
DELAY-D	0	D
DELAY-E	0	E
DELAY-F	0	F

Delay Logic Times
<C+0+D=0> (seconds)

Omit Alarm | <C/5+F+0>

Disable Alarm Reporting

Table with columns: Row, Time, Plan, Offset, Day of Week. Rows 0-9 show time and plan values. Row 0: 00:00, E, A, 234567.

TOD Coordination <C+0+9=0.1> (Bank 1)

Table with columns: Time, I.unct, Day of Week. Rows 0-9 show time and function values. Row 0: 00:00, 0, empty.

TOD Function <C+0+7=0.1>

Table with columns: Column 4 Phases/Bits. Row 0: empty.

<C+0+E=27>

Table with columns: Day, Year, Month, Holiday Type. Rows 0-9 show time and holiday data. Row 0: 00, 00, 0, empty.

Holiday Dates <C+0+8=1.1> (Bank 1)

Table with columns: Time, Plan, Offset, Holiday Type. Rows 0-9 show time and holiday data. Row 0: 00:00, 0, 0, empty.

Holiday Events <C+0+9=1.1> (Bank 1)

- T.O.D. Functions
0 =
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 4 - Disable Detector
OFF Monitor
Bit 5 - Disable Low
Priority Preempt
Bit 7 - Detector Count
Monitor
Bit 8 - Real Time Split
Monitor
F = Output Bits 1 thru 8

- Plan Select
1 thru 9 = Coordination
Plan 1 thru 9
14 or E = Free
15 or F = Flash

- Offset Select
A = Offset A
B = Offset B
C = Offset C

- Month Select
1 = January
2 = February
3 = March
4 = April
5 = May
6 = June
7 = July
8 = August
9 = September
A = October
B = November
C = December

Table with columns: Row, Time, Plan, Offset, Day of Week. Rows 0-9 show time and plan values. Row 0: 00:00, 0, 0, empty.

TOD Coordination <C+0+9=0.2> (Bank 2)

Table with columns: Time, I.unct, Holiday Type. Rows 0-9 show time and function values. Row 0: 00:00, 0, empty.

Holiday TOD Function <C+0+7=0.2>

Table with columns: Column 4 Phases/Bits. Row 0: empty.

<C+0+E=28>

Table with columns: Day, Year, Month, Holiday Type. Rows 0-9 show time and holiday data. Row 0: 00, 00, 0, empty.

Holiday Dates <C+0+8=1.2> (Bank 2)

Table with columns: Time, Plan, Offset, Holiday Type. Rows 0-9 show time and holiday data. Row 0: 00:00, 0, 0, empty.

Holiday Events <C+0+9=1.2> (Bank 2)

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Special Event Schedule -- Table 1

<C+0+E=27>

Notes: _____

0 <E/27+5+F>
Limited Service Interval

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Special Event Schedule -- Table 2

<C+0+E=28>

Notes: _____

0 <E/28+5+F>
Limited Service Interval

Min Time (seconds) | 2 | <F/1+0+8>
Min Green Before PE Force Off

Max Time (minutes) | 2 | <F/1+0+9>
Max Preempt Time Before Failure

Min Time (seconds) | 0 | <F/1+0+A>
Min Time Between Same Preempts
 (Does Not Apply To Railroad Preempt)

Low Pri. Channel | | <E/125+C+8>
Disable Low Priority Channel

- Low Priority
 1 = Channel A
 2 = Channel B
 3 = Channel C
 4 = Channel D

Delay Time (seconds) | 0 | <F/1+A+D>
Bus Delay

Max Time (seconds) | 0 | <F/1+A+E>
Max Early Green

Max Time (seconds) | 0 | <F/1+A+F>
Max Green Extension

Row	Time	Headway	Direction	Day of Week
0	00 : 00	0	0	_____
1	00 : 00	0	0	_____
2	00 : 00	0	0	_____
3	00 : 00	0	0	_____
4	00 : 00	0	0	_____
5	00 : 00	0	0	_____
6	00 : 00	0	0	_____
7	00 : 00	0	0	_____
8	00 : 00	0	0	_____
9	00 : 00	0	0	_____
A	00 : 00	0	0	_____
B	00 : 00	0	0	_____
C	00 : 00	0	0	_____
D	00 : 00	0	0	_____
E	00 : 00	0	0	_____
F	00 : 00	0	0	_____

Headway Time
 (minutes)
 1 thru 9 = 1 thru 9
 A = 10
 B = 11
 C = 12
 D = 13
 E = 14
 F = 15

Headway <C+0+9=2.1>

Low Priority Preemption (Bus Priority)

Only available with *Program 233RV2.B* (and above)

Note: Also see "Time of Day Functions", Function E, Bit 5 (Disable Low Priority)

Group Assignment: **NONE**
 Field Master Assignment: **NONE**
 System Reference Number: **246**

N/S Street Name: **Auto Park Ave**
 E/W Street Name: **Main St**

Last Database Change: 5/20/2021 9:38

Change Record					
Change	By	Date	Change	By	Date

Notes: _____

Manual Plan
 0 = Automatic
 1-9 = Plan 1-9
 14 = Free
 15 = Flash

Manual Offset
 0 = Automatic
 1 = Offset A
 2 = Offset B
 3 = Offset C

Drop Number	1	<C/0+0+0>
Zone Number	1	<C/0+0+1>
Area Number	0	<C/0+0+2>
Area Address	147	<C/0+0+3>
QuicNet Channel	P:8018:10.242.20	(QuicNet)

Manual Plan		<C/0+A+1>
Manual Offset		<C/0+B+1>

Flash Start	0	<F/1+0+E>
Red Revert	3.0	<F/1+0+F>
All Red Start	5.0	<F/1+C+0>

Exclusive Walk	0	<F/1+0+0>
Exclusive FDW	0	<F/1+0+1>
All Red Clear	0.0	<F/1+0+2>

Communication Addresses

Manual Selection

Start / Revert Times

Exclusive Ped Phase

(Outputs specified in Assignable
 Outputs at E/127+A+E & F)

Row	Column Numbers ---->	Phase							
		1	2	3	4	5	6	7	8
	Phase Names ---->								
0	Ped Walk	0	0	0	7	0	7	0	0
1	Ped FDW	0	0	0	30	0	18	0	0
2	Min Green	4	10	0	7	4	10	0	0
3	Type 3 Disconnect	0	0	0	0	0	0	0	0
4	Added per Vehicle	0.0	1.2	0.0	0.0	0.0	1.2	0.0	0.0
5	Veh Extension	2.0	5.0	0.0	3.0	2.0	5.0	0.0	0.0
6	Max Gap	2.0	5.8	0.0	3.0	2.0	5.8	0.0	0.0
7	Min Gap	2.0	2.0	0.0	3.0	2.0	2.0	0.0	0.0
8	Max Limit	16	50	0	34	24	50	0	0
9	Max Limit 2	0	0	0	0	0	0	0	0
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	PE Min Ped FDW	0	0	0	0	0	0	0	0
C	Cond Serv Check	0	0	0	0	0	0	0	0
D	Reduce Every	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0
E	Yellow Change	3.2	4.7	0.0	3.6	3.2	4.7	0.0	0.0
F	Red Clear	1.0	1.3	0.0	1.0	1.0	1.3	0.0	0.0

Phase Timing - Bank 1 <C+0+F=1>

	9	A	B	C	D
Phase 1	0	0	0	0	0.0
Phase 2	20	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	20	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	20	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	20	0	0	0	0.0

Max Initial
 Alternate Walk
 Alternate FDW
 Alternate Initial
 Alternate Extension

Alternate Timing <C+0+F=1>

	E
RR-1 Delay	0
RR-1 Clear	0
EV-A Delay	0
EV-A Clear	0
EV-B Delay	0
EV-B Clear	0
EV-C Delay	0
EV-C Clear	0
EV-D Delay	0
EV-D Clear	0
RR-2 Delay	0
RR-2 Clear	0
View EV Delay	---
View EV Clear	---
View RR Delay	---
View RR Clear	---

Preempt Timing

	F	Row
Permit	12_456__	0
Red Lock	_____	1
Yellow Lock	_____	2
Min Recall	2_6__	3
Ped Recall	_____	4
View Set Peds	-----	5
Rest In Walk	_____	6
Red Rest	_____	7
Dual Entry	_____	8
Max Recall	_____	9
Soft Recall	_____	A
Max 2	_____	B
Cond. Service	_____	C
Man Cntrl Calls	_____	D
Yellow Start	_____	E
First Phases	2_6__	F

Phase Functions <C+0+F=1>

		Overlap							
Column Numbers ---->		1	2	3	4	5	6	7	8
Row	Overlap Name ---->								
0	Load Switch Number	0	0	0	0	0	0	0	0
1	Veh Set 1 - Phases								
2	Veh Set 2 - Phases								
3	Veh Set 3 - Phases								
4	Neg Veh Phases								
5	Neg Ped Phases								
6	Green Omit Phases								
7	Green Clear Omit Phs.								
8									
9									
A									
B									
C									
D	Green Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
F	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Overlap Assignments <C+0+E=29>

- Extra 1 Flags**
 1 = TBC Type 1
 2 = NEMA Ext. Coord
 3 = Auto Daylight Savings
 4 = Solid FDW on EV
 5 = Extended Status
 6 = International Ped
 7 = Flash - Clear Outputs
 8 = Split Ring

- Extra 2 Flags**
 1 = AWB During Initial
 2 = LMU Installed
 3 = Disable Min Walk
 4 = QuicNet/4 System
 5 = Ignore P/P on EV
 6 =
 7 = Allow QuicNet PE
 8 =

	C	Row
EV-A	0	0
EV-B	0	1
EV-C	0	2
EV-D	0	3
RR-1 *	---	4
RR-2 *	---	5
SE-1	0	6
SE-2	0	7

Preempt Priority
 <C+0+E=125>
 (* RR-1 is always Highest, and RR-2 is always Second Highest)

Row	Column Numbers ---->	E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Flash to PE Circuits	
6	Flash Entry Phases	
7	Disable Yellow Range	
8	Disable Ovp Yel Range	
9	Overlap Yellow Flash	
A	EV-A Phases	2 5
B	EV-B Phases	4
C	EV-C Phases	1 6
D	EV-D Phases	
E	Extra 1 Config. Bits	1 3 5
F	IC Select (Interconnect)	2

Configuration <C+0+E=125>

	F
Ext. Permit 1 Phases	
Ext. Permit 2 Phases	
Exclusive Ped Assign	
Preempt Non-Lock	
Ped for 2P Output	2
Ped for 6P Output	6
Ped for 4P Output	4
Ped for 8P Output	
Yellow Flash Phases	
Low Priority A Phases	
Low Priority B Phases	
Low Priority C Phases	
Low Priority D Phases	
Restricted Phases	
Extra 2 Config. Bits	3

Configuration <C+0+E=125>

	F
Fast Green Flash Phase	
Green Flash Phases	
Flashing Walk Phases	
Guaranteed Passage	
Simultaneous Gap Term	12345678
Sequential Timing	1 5
Advance Walk Phases	
Delay Walk Phases	
External Recall	
Start-up Overlap Green	
Max Extension	
Inhibit Ped Reserve	
Semi-Actuated	
Start-up Overlap Yellow	
Start-up Vehicle Calls	12345678
Start-up Ped Calls	12345678

Specials <C+0+F=2>

- Flash to PE & PE Non-Lock**
 1 = EV A 5 = RR 1
 2 = EV B 6 = RR 2
 3 = EV C 7 = SE 1
 4 = EV D 8 = SE 2

- IC Select Flags**
 1 =
 2 = Modem
 3 = 7-Wire Slave
 4 = Flash / Free
 5 =
 6 = Simplex Master
 7 = 7-Wire Master
 8 = Offset Interrupter

	2	Row
Phase 1	5	1
Phase 2	5	2
Phase 3	5	3
Phase 4	5	4
Phase 5	5	5
Phase 6	5	6
Phase 7	5	7
Phase 8	5	8

Coordination Transition Minims
 <C+0+C=5>

Column Numbers ---->		Plan								
Row	Plan Name ---->	1	2	3	4	5	6	7	8	9
0	Cycle Length	84	96	108	0	0	110	110	110	110
1	Phase 1 - ForceOff	37	44	49	0	0	57	62	57	62
2	Phase 2 - ForceOff	0	0	0	0	0	0	0	0	0
3	Phase 3 - ForceOff	0	0	0	0	0	0	0	0	0
4	Phase 4 - ForceOff	20	26	30	0	0	37	37	32	37
5	Phase 5 - ForceOff	41	49	55	0	0	60	62	57	62
6	Phase 6 - ForceOff	0	0	0	0	0	0	0	0	0
7	Phase 7 - ForceOff	0	0	0	0	0	0	0	0	0
8	Phase 8 - ForceOff	0	0	0	0	0	0	0	0	0
9	Ring Offset	0	0	0	0	0	0	0	0	0
A	Offset 1	10	10	50	0	0	44	12	33	12
B	Offset 2	0	0	0	0	0	0	0	0	0
C	Offset 3	0	0	0	0	0	0	0	0	0
D	Perm 1 - End	0	0	0	0	0	5	5	5	5
E	Hold Release	255	255	255	0	0	255	255	255	255
F	Zone Offset	0	0	0	0	0	0	0	0	0

Coordination - Bank 1 <C+0+C=1>

0	Ped Adjustment	9	6	4	0	0	4	4	6	4
1	Perm 2 - Start	0	0	0	0	0	0	0	0	0
2	Perm 2 - End	0	0	0	0	0	0	0	0	0
3	Perm 3 - Start	0	0	0	0	0	0	0	0	0
4	Perm 3 - End	0	0	0	0	0	0	0	0	0
5	Reservice Time	0	0	0	0	0	0	0	0	0
6	Reservice Phases									
7										
8	Pretimed Phases									
9	Max Recall									
A	Perm 1 Veh Phase	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678
B	Perm 1 Ped Phase	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678
C	Perm 2 Veh Phase									
D	Perm 2 Ped Phase									
E	Perm 3 Veh Phase									
F	Perm 3 Ped Phase									

Coordination - Bank 2 <C+0+C=2>

Coord Extra
 1 = Programmed WALK Time for Sync Phases
 2 = Always Terminate Sync Phase Peds

Row	E	Row
0		0
1	Plan 1 - Sync	2 6
2	Plan 2 - Sync	2 6
3	Plan 3 - Sync	2 6
4	Plan 4 - Sync	
5	Plan 5 - Sync	
6	Plan 6 - Sync	2 6
7	Plan 7 - Sync	2 6
8	Plan 8 - Sync	2 6
9	Plan 9 - Sync	2 6
A	NEMA Sync	
B	NEMA Hold	
C		
D		
E	Coord Extra	
F		

Sync Phases <C+0+C=1>

Row	F	Row
0	Free Lag	2 4 6
1	Plan 1 - Lag	2 4 6
2	Plan 2 - Lag	2 4 6
3	Plan 3 - Lag	2 4 6
4	Plan 4 - Lag	
5	Plan 5 - Lag	
6	Plan 6 - Lag	2 4 6
7	Plan 7 - Lag	2 4 6
8	Plan 8 - Lag	2 4 6
9	Plan 9 - Lag	2 4 6
A	External Lag	
B		
C		
D		
E		
F		

Lag Phases <C+0+C=1>

Row	Column 9		Column A		Column B		Column C		Column D		Column E		Column F		Row
0	Spec. Funct. 1	0	NOT-3	0	Max 2	0	Pretimed	0	Set Monday	0	Dial 2 (7-Wire)	0	Sim Term	0	0
1	Spec. Funct. 2	0	NOT-4	0	System Det 1	0	Plan 1	0	Ext. Perm 1	0	Dial 3 (7-Wire)	0	EV-A	71	1
2	Spec. Funct. 3	0	OR-4 (a)	0	System Det 2	0	Plan 2	0	Ext. Perm 2	0	Offset 1 (7-Wire)	0	EV-B	72	2
3	Spec. Funct. 4	0	OR-4 (b)	0	System Det 3	0	Plan 3	0	Reserved	0	Offset 2 (7-Wire)	0	EV-C	73	3
4	NAND-3 (a)	0	OR-5 (a)	0	System Det 4	0	Plan 4	0	Set Clock	0	Offset 3 (7-Wire)	0	EV-D	74	4
5	NAND-3 (b)	0	OR-5 (b)	0	System Det 5	0	Plan 5	0	Stop Time	82	Free (7-Wire)	0	RR-1	51	5
6	NAND-4 (a)	0	OR-6 (a)	0	System Det 6	0	Plan 6	0	Flash Sense	81	Flash (7-Wire)	0	RR-2	52	6
7	NAND-4 (b)	0	OR-6 (b)	0	System Det 7	0	Plan 7	0	Manual Enable	0	Excl. Ped Omit	0	Spec. Event 1	0	7
8	OR-7 (a)	0	Fig 3 Diamond	0	System Det 8	0	Plan 8	0	Man. Advance	0	NOT-1	0	Spec. Event 2	0	8
9	OR-7 (b)	0	Fig 4 Diamond	0	Max Inhibit (nema)	0	Plan 9	0	External Alarm	0	NOT-2	0	External Lag	0	9
A	OR-7 (c)	0	AND-4 (a)	0	Force A (nema)	0	DELAY-A	0	Phase Bank 2	0	OR-1 (a)	0	AND-1 (a)	0	A
B	OR-7 (d)	0	AND-4 (b)	0	Force B (nema)	0	DELAY-B	0	Phase Bank 3	0	OR-1 (b)	0	AND-1 (b)	0	B
C	OR-8 (a)	0	NAND-1 (a)	0	C.N.A. (nema)	0	DELAY-C	0	Overlap Set 2	0	OR-2 (a)	0	AND-2 (a)	0	C
D	OR-8 (b)	0	NAND-1 (b)	0	Hold (nema)	0	DELAY-D	0	Overlap Set 3	0	OR-2 (b)	0	AND-2 (b)	0	D
E	OR-8 (c)	0	NAND-2 (a)	0	Max Recall	0	DELAY-E	0	Detector Set 2	0	OR-3 (a)	0	AND-3 (a)	0	E
F	OR-8 (d)	0	NAND-2 (b)	0	Min Recall	0	DELAY-F	0	Detector Set 3	0	OR-3 (b)	0	AND-3 (b)	0	F

Assignable Inputs

<C+0+E=126>

Row	Column 9		Column A		Column B		Column C		Column D		Column E		Column F		Row
0	Phase ON - 1	0	Preempt Fail	0	Flasher 0	0	Free	0	NOT-1	0	TOD Out 1	0	Dial 2 (7-Wire)	0	0
1	Phase ON - 2	0	Sp Evnt Out 1	0	Flasher 1	0	Plan 1	0	OR-1	0	TOD Out 2	0	Dial 3 (7-Wire)	0	1
2	Phase ON - 3	0	Sp Evnt Out 2	0	Fast Flasher	0	Plan 2	0	OR-2	0	TOD Out 3	0	Offset 1 (7-Wire)	0	2
3	Phase ON - 4	0	Sp Evnt Out 3	0	Fig 3 Diamond	0	Plan 3	0	OR-3	0	TOD Out 4	0	Offset 2 (7-Wire)	0	3
4	Phase ON - 5	0	Sp Evnt Out 4	0	Fig 4 Diamond	0	Plan 4	0	AND-1	0	TOD Out 5	0	Offset 3 (7-Wire)	0	4
5	Phase ON - 6	0	Sp Evnt Out 5	0			Plan 5	0	AND-2	0	TOD Out 6	0	Free (7-Wire)	0	5
6	Phase ON - 7	0	Sp Evnt Out 6	0			Plan 6	0	AND-3	0	TOD Out 7	0	Flash (7-Wire)	0	6
7	Phase ON - 8	0	Sp Evnt Out 7	0			Plan 7	0	NOT-2	0	TOD Out 8	0	Preempt	0	7
8	Ph. Check - 1	0	Sp Evnt Out 8	0	NOT-3	0	Plan 8	0	EV-A	0	Adv. Warn - 1	0	Low Priority A	0	8
9	Ph. Check - 2	0			NOT-4	0	Plan 9	0	EV-B	0	Adv. Warn - 2	0	Low Priority B	0	9
A	Ph. Check - 3	0	Detector Fail	0	OR-4	0	Spec. Funct. 3	0	EV-C	0	DELAY-A	0	Low Priority C	0	A
B	Ph. Check - 4	0	Spec. Funct. 1	0	OR-5	0	Spec. Funct. 4	0	EV-D	0	DELAY-B	0	Low Priority D	0	B
C	Ph. Check - 5	0	Spec. Funct. 2	0	OR-6	0	NAND-3	0	RR-1	0	DELAY-C	0			C
D	Ph. Check - 6	0	Central Control	0	AND-4	0	NAND-4	0	RR-2	0	DELAY-D	0			D
E	Ph. Check - 7	0	Excl. Ped DW	0	NAND-1	0	OR-7	0	Spec. Event 1	0	DELAY-E	0			E
F	Ph. Check - 8	0	Excl. Ped WK	0	NAND-2	0	OR-8	0	Spec. Event 2	0	DELAY-F	0			F

Assignable Outputs

<C+0+E=127>

Row	Phase Names ---->	Phase							
		1	2	3	4	5	6	7	8
0	Ped Walk	0	0	0	0	0	0	0	0
1	Ped FDW	0	0	0	0	0	0	0	0
2	Min Green	0	0	0	0	0	0	0	0
3	Type 3 Disconnect	0	0	0	0	0	0	0	0
4	Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Veh Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	Max Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	Max Limit	0	0	0	0	0	0	0	0
9	Max Limit 2	0	0	0	0	0	0	0	0
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	PE Min Ped FDW	0	0	0	0	0	0	0	0
C	Cond Serv Check	0	0	0	0	0	0	0	0
D	Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
F	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Phase Timing - Bank 2 <C+0+F=2>

Row	Phase Names ---->	Phase							
		1	2	3	4	5	6	7	8
0	Ped Walk	0	0	0	0	0	0	0	0
1	Ped FDW	0	0	0	0	0	0	0	0
2	Min Green	0	0	0	0	0	0	0	0
3	Type 3 Disconnect	0	0	0	0	0	0	0	0
4	Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Veh Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	Max Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	Max Limit	0	0	0	0	0	0	0	0
9	Max Limit 2	0	0	0	0	0	0	0	0
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	PE Min Ped FDW	0	0	0	0	0	0	0	0
C	Cond Serv Check	0	0	0	0	0	0	0	0
D	Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
F	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Phase Timing - Bank 3 <C+0+F=3>

	9	A	B	C	D
Phase 1	0	0	0	0	0.0
Phase 2	0	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	0	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	0	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	0	0	0	0	0.0
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing

	9	A	B	C	D
Phase 1	0	0	0	0	0.0
Phase 2	0	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	0	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	0	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	0	0	0	0	0.0
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing

Transition Type
 0.X = Shortway
 1.X = Lengthen
 X.1 thru X.4 =
 Number of
 cycles when
 lengthing

Transition Type	0.3	<C/5+1+9>
-----------------	-----	-----------

TBC Transition

Lag Hold Phases		<C/5+1+A>
-----------------	--	-----------

Coordinated Lag Hold Phases

Daylight Savings
 Date
 If set to all zeros,
 standard dates
 will be used.

Begin Month	0	<C/5+2+A>
Begin Week	0	<C/5+2+B>
End Month	0	<C/5+2+C>
End Week	0	<C/5+2+D>

Daylight Savings Time

Time B4 Yellow	0.0	<F/1+C+E>
Phase Number	0	<F/1+C+F>

Advance Warning Beacon - Sign 1

Time B4 Yellow	0.0	<F/1+D+E>
Phase Number	0	<F/1+D+F>

Advance Warning Beacon - Sign 2

Column Numbers ---->		0	1	2	3	1	3
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0		39	45 7	2	123	2.0	1.5
1		40	45 7	6	123	0.0	0.0
2		41	45 7	4	123	0.0	0.0
3		42	45 7	8	123	0.0	0.0
4		43	45 7	2	123	0.0	0.0
5		44	45 7	6	123	0.0	0.0
6		45	45 7	4	123	0.0	0.0
7		46	45 7	8	123	0.0	0.0
8		47	45 7	2	123	0.0	0.0
9		48	45 7	6	123	0.0	0.0
A		49	45 7	4	123	0.0	0.0
B		50	45 7	8	123	8.0	0.0
C		55	45 7	5	123	0.0	0.0
D		56	45 7	1	123	0.0	0.0
E		57	45 7	7	123	0.0	0.0
F		58	45 7	3	123	0.0	0.0

Column Numbers ---->		4	5	6	7	2	4
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0		59	45 7	5	123	2.0	1.5
1		60	45 7	1	123	0.0	0.0
2		61	45 7	7	123	0.0	0.0
3		62	45 7	3	123	0.0	0.0
4		63	45 7	2	123	0.0	0.0
5		64	45 7	6	123	0.0	0.0
6		65	45 7	4	123	0.0	0.0
7		66	45 7	8	123	0.0	0.0
8		67	2	2	123	0.0	0.0
9		68	2	6	123	0.0	0.0
A		69	2	4	123	0.0	0.0
B		70	2	8	123	0.0	0.0
C		76	45 7	2	123	0.0	0.0
D		77	45 7	6	123	0.0	0.0
E		78	45 7	4	123	0.0	0.0
F		79	45 7	8	123	0.0	0.0

Detector Assignments <C+0+E=126>

Detector Attributes

- 1 = Full Time Delay
- 2 = Ped Call
- 3 =
- 4 = Count
- 5 = Extension
- 6 = Type 3
- 7 = Calling
- 8 = Alternate

Det. Assignments

- 1 = Det. Set 1
- 2 = Det. Set 2
- 3 = Det. Set 3
- 4 =
- 5 =
- 6 = Failure - Min Recall
- 7 = Failure - Max Recall
- 8 = Report on Failure

<C+0+D=0>

Column Numbers ---->		Ped / Phase / Overlap								Row
		1	2	3	4	5	6	7	8	
Walk		0	0	0	0	0	0	0	0	0
Don't Walk		0	0	0	0	0	0	0	0	1
Phase Green		0	0	0	0	0	0	0	0	2
Phase Yellow		0	0	0	0	0	0	0	0	3
Phase Red		0	0	0	0	0	0	0	0	4
Overlap Green		0	0	0	0	0	0	0	0	5
Overlap Yellow		0	0	0	0	0	0	0	0	6
Overlap Red		0	0	0	0	0	0	0	0	7

Redirect Phase Outputs <C+0+E=127>

Cabinet Type | 0 <E/125+D+0>

Enable Redirection
(Enable Redirection = 30)

Max OFF (minutes) | 20 <D/0+0+1>

Max ON (minutes) | 7 <D/0+0+2>

Detector Failure Monitor

Disable Alarms

- 1 = Stop Time
- 2 = Flash Sense
- 3 = Keyboard Entry
- 4 = Manual Plan
- 5 = Police Control
- 6 = External Alarm
- 7 = Detector Failure
- 8 =

	B	Row
DELAY-A	0	A
DELAY-B	0	B
DELAY-C	0	C
DELAY-D	0	D
DELAY-E	0	E
DELAY-F	0	F

Delay Logic Times
<C+0+D=0> (seconds)

Omit Alarm | <C/5+F+0>

Disable Alarm Reporting

Row	Time	Plan	Offset	Day of Week
0	00 : 00	E	A	1234567
1	07 : 00	6	A	23456
2	10 : 00	E	A	23456
3	10 : 30	7	A	23456
4	13 : 30	E	A	23456
5	14 : 00	8	A	23456
6	18 : 30	E	A	23456
7	10 : 30	9	A	1 7
8	16 : 00	E	A	1 7
9	00 : 00	0	0	
A	00 : 00	0	0	
B	00 : 00	0	0	
C	00 : 00	0	0	
D	00 : 00	0	0	
E	00 : 00	0	0	
F	00 : 00	0	0	

TOD Coordination <C+0+9=0.1>
(Bank 1)

Time	Funct	Day of Week	Column 4 Phases/Bits
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		

TOD Function <C+0+7=0.1> <C+0+E=27>

Day	Year	Month	Holiday Type
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	

Holiday Dates <C+0+8=1.1>
(Bank 1)

Time	Plan	Offset	Holiday Type
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	

Holiday Events <C+0+9=1.1>
(Bank 1)

- T.O.D. Functions**
 0 =
 1 = Red Lock
 2 = Yellow Lock
 3 = Veh Min Recall
 4 = Ped Recall
 5 =
 6 = Rest In Walk
 7 = Red Rest
 8 = Double Entry
 9 = Veh Max Recall
 A = Veh Soft Recall
 B = Maximum 2
 C = Conditional Service
 D = Free Lag Phases
 E = Bit 1 - Local Override
 Bit 4 - Disable Detector Monitor
 Bit 5 - Disable Low Priority Preempt
 Bit 7 - Detector Count Monitor
 Bit 8 - Real Time Split Monitor
 F = Output Bits 1 thru 8

Row	Time	Plan	Offset	Day of Week
0	00 : 00	0	0	
1	00 : 00	0	0	
2	00 : 00	0	0	
3	00 : 00	0	0	
4	00 : 00	0	0	
5	00 : 00	0	0	
6	00 : 00	0	0	
7	00 : 00	0	0	
8	00 : 00	0	0	
9	00 : 00	0	0	
A	00 : 00	0	0	
B	00 : 00	0	0	
C	00 : 00	0	0	
D	00 : 00	0	0	
E	00 : 00	0	0	
F	00 : 00	0	0	

TOD Coordination <C+0+9=0.2>
(Bank 2)

Time	Funct	Holiday Type	Column 4 Phases/Bits
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		

Holiday TOD Function <C+0+7=0.2> <C+0+E=28>

Day	Year	Month	Holiday Type
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	

Holiday Dates <C+0+8=1.2>
(Bank 2)

Time	Plan	Offset	Holiday Type
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	

Holiday Events <C+0+9=1.2>
(Bank 2)

- Plan Select**
 1 thru 9 = Coordination Plan 1 thru 9
 14 or E = Free
 15 or F = Flash
- Offset Select**
 A = Offset A
 B = Offset B
 C = Offset C
- Month Select**
 1 = January
 2 = February
 3 = March
 4 = April
 5 = May
 6 = June
 7 = July
 8 = August
 9 = September
 A = October
 B = November
 C = December

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Special Event Schedule -- Table 1

<C+0+E=27>

Notes: _____

0 <E/27+5+F>
Limited Service Interval

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Special Event Schedule -- Table 2

<C+0+E=28>

Notes: _____

0 <E/28+5+F>
Limited Service Interval

Min Time (seconds) | 2 | <F/1+0+8>
Min Green Before PE Force Off

Max Time (minutes) | 2 | <F/1+0+9>
Max Preempt Time Before Failure

Min Time (seconds) | 0 | <F/1+0+A>
Min Time Between Same Preempts
 (Does Not Apply To Railroad Preempt)

Low Pri. Channel | | <E/125+C+8>
Disable Low Priority Channel

- Low Priority
 1 = Channel A
 2 = Channel B
 3 = Channel C
 4 = Channel D

Delay Time (seconds) | 0 | <F/1+A+D>
Bus Delay

Max Time (seconds) | 0 | <F/1+A+E>
Max Early Green

Max Time (seconds) | 0 | <F/1+A+F>
Max Green Extension

Row	Time	Headway	Direction	Day of Week
0	00 : 00	0	0	_____
1	00 : 00	0	0	_____
2	00 : 00	0	0	_____
3	00 : 00	0	0	_____
4	00 : 00	0	0	_____
5	00 : 00	0	0	_____
6	00 : 00	0	0	_____
7	00 : 00	0	0	_____
8	00 : 00	0	0	_____
9	00 : 00	0	0	_____
A	00 : 00	0	0	_____
B	00 : 00	0	0	_____
C	00 : 00	0	0	_____
D	00 : 00	0	0	_____
E	00 : 00	0	0	_____
F	00 : 00	0	0	_____

Headway Time
 (minutes)
 1 thru 9 = 1 thru 9
 A = 10
 B = 11
 C = 12
 D = 13
 E = 14
 F = 15

Headway <C+0+9=2.1>

Low Priority Preemption (Bus Priority)

Only available with *Program 233RV2.B* (and above)

Note: Also see "Time of Day Functions", Function E, Bit 5 (Disable Low Priority)

INTERSECTION: 167 Main/Maxwell

Group Assignment: **NONE**
 Field Master Assignment: **NONE**
 System Reference Number: **167**

N/S Street Name: **Maxwell Rd**
 E/W Street Name: **Main St**

Last Database Change: **5/20/2021 9:40**

Change Record					
Change	By	Date	Change	By	Date

Notes: _____

Manual Plan
 0 = Automatic
 1-9 = Plan 1-9
 14 = Free
 15 = Flash

Manual Offset
 0 = Automatic
 1 = Offset A
 2 = Offset B
 3 = Offset C

Drop Number	1	<C/0+0+0>
Zone Number	1	<C/0+0+1>
Area Number	0	<C/0+0+2>
Area Address	143	<C/0+0+3>
QuicNet Channel	P:8018:10.242.20	(QuicNet)

Manual Plan		<C/0+A+1>
Manual Offset		<C/0+B+1>

Flash Start	0	<F/1+0+E>
Red Revert	3.0	<F/1+0+F>
All Red Start	5.0	<F/1+C+0>

Exclusive Walk	0	<F/1+0+0>
Exclusive FDW	0	<F/1+0+1>
All Red Clear	0.0	<F/1+0+2>

Communication Addresses

Manual Selection

Start / Revert Times

Exclusive Ped Phase

(Outputs specified in Assignable
 Outputs at E/127+A+E & F)

Row	Column Numbers ---->	Phase							
		1	2	3	4	5	6	7	8
	Phase Names ---->								
0	Ped Walk	0	7	7	0	0	7	0	0
1	Ped FDW	0	11	31	0	0	20	0	0
2	Min Green	4	10	10	10	10	10	0	0
3	Type 3 Disconnect	0	0	0	0	0	0	0	0
4	Added per Vehicle	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0
5	Veh Extension	2.0	5.5	3.0	3.0	2.0	8.0	0.0	0.0
6	Max Gap	2.0	6.2	3.0	3.0	2.0	8.0	0.0	0.0
7	Min Gap	2.0	2.0	3.0	3.0	2.0	8.0	0.0	0.0
8	Max Limit	14	40	30	30	30	40	0	0
9	Max Limit 2	0	0	0	0	0	0	0	0
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	PE Min Ped FDW	0	0	0	0	0	0	0	0
C	Cond Serv Check	0	0	0	0	0	0	0	0
D	Reduce Every	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0
E	Yellow Change	3.2	4.7	4.1	3.9	3.2	4.7	0.0	0.0
F	Red Clear	1.0	1.6	1.0	1.0	1.0	1.6	0.0	0.0

Phase Timing - Bank 1 <C+0+F=1>

	9	A	B	C	D
	---	---	---	---	---
Phase 1	0	0	0	0	0.0
Phase 2	20	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	20	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	20	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	20	0	0	0	0.0
Max Initial	/				
Alternate Walk	/				
Alternate FDW	/				
Alternate Initial	/				
Alternate Extension	/				

Alternate Timing <C+0+F=1>

	E
RR-1 Delay	0
RR-1 Clear	0
EV-A Delay	0
EV-A Clear	0
EV-B Delay	0
EV-B Clear	0
EV-C Delay	0
EV-C Clear	0
EV-D Delay	0
EV-D Clear	0
RR-2 Delay	0
RR-2 Clear	0
View EV Delay	---
View EV Clear	---
View RR Delay	---
View RR Clear	---

Preempt Timing

	F	Row
Permit	123456	0
Red Lock	_____	1
Yellow Lock	_____	2
Min Recall	2 6	3
Ped Recall	_____	4
View Set Peds	-----	5
Rest In Walk	_____	6
Red Rest	_____	7
Dual Entry	_____	8
Max Recall	_____	9
Soft Recall	_____	A
Max 2	_____	B
Cond. Service	_____	C
Man Cntrl Calls	_____	D
Yellow Start	_____	E
First Phases	2 6	F

Phase Functions <C+0+F=1>

		Overlap							
Column Numbers ---->		1	2	3	4	5	6	7	8
Row	Overlap Name ---->								
0	Load Switch Number	0	0	0	0	0	0	0	0
1	Veh Set 1 - Phases								
2	Veh Set 2 - Phases								
3	Veh Set 3 - Phases								
4	Neg Veh Phases								
5	Neg Ped Phases								
6	Green Omit Phases								
7	Green Clear Omit Phs.								
8									
9									
A									
B									
C									
D	Green Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
F	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Overlap Assignments <C+0+E=29>

Extra 1 Flags

- 1 = TBC Type 1
- 2 = NEMA Ext. Coord
- 3 = Auto Daylight Savings
- 4 = Solid FDW on EV
- 5 = Extended Status
- 6 = International Ped
- 7 = Flash - Clear Outputs
- 8 = Split Ring

Extra 2 Flags

- 1 = AWB During Initial
- 2 = LMU Installed
- 3 = Disable Min Walk
- 4 = QuicNet/4 System
- 5 = Ignore P/P on EV
- 6 =
- 7 = Allow QuicNet PE
- 8 =

	C	Row
EV-A	0	0
EV-B	0	1
EV-C	0	2
EV-D	0	3
RR-1 *	---	4
RR-2 *	---	5
SE-1	0	6
SE-2	0	7

Preempt Priority

<C+0+E=125>
 (* RR-1 is always Highest, and RR-2 is always Second Highest)

Row	Column Numbers ---->	E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Flash to PE Circuits	
6	Flash Entry Phases	
7	Disable Yellow Range	
8	Disable Ovp Yel Range	
9	Overlap Yellow Flash	
A	EV-A Phases	2 5
B	EV-B Phases	4
C	EV-C Phases	1 6
D	EV-D Phases	
E	Extra 1 Config. Bits	1 3 5
F	IC Select (Interconnect)	2

Configuration <C+0+E=125>

	F
Ext. Permit 1 Phases	
Ext. Permit 2 Phases	
Exclusive Ped Assign	
Preempt Non-Lock	
Ped for 2P Output	2
Ped for 6P Output	6
Ped for 4P Output	
Ped for 8P Output	3
Yellow Flash Phases	
Low Priority A Phases	
Low Priority B Phases	
Low Priority C Phases	
Low Priority D Phases	
Restricted Phases	
Extra 2 Config. Bits	3

Configuration <C+0+E=125>

	F
Fast Green Flash Phase	
Green Flash Phases	
Flashing Walk Phases	
Guaranteed Passage	
Simultaneous Gap Term	12345678
Sequential Timing	
Advance Walk Phases	
Delay Walk Phases	
External Recall	
Start-up Overlap Green	
Max Extension	
Inhibit Ped Reservice	
Semi-Actuated	
Start-up Overlap Yellow	
Start-up Vehicle Calls	12345678
Start-up Ped Calls	12345678

Specials <C+0+F=2>

Flash to PE & PE Non-Lock

- 1 = EV A 5 = RR 1
- 2 = EV B 6 = RR 2
- 3 = EV C 7 = SE 1
- 4 = EV D 8 = SE 2

IC Select Flags

- 1 =
- 2 = Modem
- 3 = 7-Wire Slave
- 4 = Flash / Free
- 5 =
- 6 = Simplex Master
- 7 = 7-Wire Master
- 8 = Offset Interrupter

	2	Row
Phase 1	10	1
Phase 2	10	2
Phase 3	10	3
Phase 4	10	4
Phase 5	10	5
Phase 6	10	6
Phase 7	10	7
Phase 8	10	8

Coordination Transition Miniums

<C+0+C=5>

Column Numbers ---->		Plan								
Row	Plan Name ---->	1	2	3	4	5	6	7	8	9
0	Cycle Length	64	64	0	0	0	110	110	90	90
1	Phase 1 - ForceOff	55	36	0	0	0	67	70	52	53
2	Phase 2 - ForceOff	0	0	0	0	0	0	0	0	0
3	Phase 3 - ForceOff	0	0	0	0	0	26	29	11	12
4	Phase 4 - ForceOff	41	22	0	0	0	47	50	32	32
5	Phase 5 - ForceOff	19	0	0	0	0	78	78	2	0
6	Phase 6 - ForceOff	0	45	0	0	0	0	0	65	65
7	Phase 7 - ForceOff	0	0	0	0	0	0	0	0	0
8	Phase 8 - ForceOff	0	0	0	0	0	0	0	0	0
9	Ring Offset	0	0	0	0	0	0	0	0	0
A	Offset 1	4	6	0	0	0	51	51	32	81
B	Offset 2	0	0	0	0	0	0	0	0	0
C	Offset 3	0	0	0	0	0	0	0	0	0
D	Perm 1 - End	0	0	0	0	0	5	5	5	5
E	Hold Release	255	255	0	0	0	255	90	255	255
F	Zone Offset	0	0	0	0	0	0	0	0	0

Coordination - Bank 1 <C+0+C=1>

0	Ped Adjustment	9	9	0	0	0	10	9	18	17
1	Perm 2 - Start	0	0	0	0	0	0	0	0	0
2	Perm 2 - End	0	0	0	0	0	0	0	0	0
3	Perm 3 - Start	0	0	0	0	0	0	0	0	0
4	Perm 3 - End	0	0	0	0	0	0	0	0	0
5	Reservice Time	0	0	0	0	0	0	0	0	0
6	Reservice Phases									
7										
8	Pretimed Phases									
9	Max Recall									
A	Perm 1 Veh Phase	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678
B	Perm 1 Ped Phase	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678
C	Perm 2 Veh Phase									
D	Perm 2 Ped Phase									
E	Perm 3 Veh Phase									
F	Perm 3 Ped Phase									

Coordination - Bank 2 <C+0+C=2>

Coord Extra
 1 = Programmed WALK Time for Sync Phases
 2 = Always Terminate Sync Phase Peds

Row	E	Row
0		0
1	Plan 1 - Sync <u> 6 </u>	1
2	Plan 2 - Sync <u> 2 5 </u>	2
3	Plan 3 - Sync _____	3
4	Plan 4 - Sync _____	4
5	Plan 5 - Sync _____	5
6	Plan 6 - Sync <u> 2 6 </u>	6
7	Plan 7 - Sync <u> 2 6 </u>	7
8	Plan 8 - Sync <u> 2 5 </u>	8
9	Plan 9 - Sync <u> 2 5 </u>	9
A	NEMA Sync _____	A
B	NEMA Hold _____	B
C		C
D		D
E	Coord Extra _____	E
F		F

Sync Phases <C+0+C=1>

Row	F	Row
0	Free Lag <u> 2 4 6 </u>	0
1	Plan 1 - Lag <u> 2 45 </u>	1
2	Plan 2 - Lag <u> 2 45 </u>	2
3	Plan 3 - Lag _____	3
4	Plan 4 - Lag _____	4
5	Plan 5 - Lag _____	5
6	Plan 6 - Lag <u> 2 4 6 </u>	6
7	Plan 7 - Lag <u> 2 4 6 </u>	7
8	Plan 8 - Lag <u> 2 45 </u>	8
9	Plan 9 - Lag <u> 2 45 </u>	9
A	External Lag _____	A
B		B
C		C
D		D
E		E
F		F

Lag Phases <C+0+C=1>

Row	Column 9		Column A		Column B		Column C		Column D		Column E		Column F		Row
0	Spec. Funct. 1	0	NOT-3	0	Max 2	0	Pretimed	0	Set Monday	0	Dial 2 (7-Wire)	0	Sim Term	0	0
1	Spec. Funct. 2	0	NOT-4	0	System Det 1	0	Plan 1	0	Ext. Perm 1	0	Dial 3 (7-Wire)	0	EV-A	71	1
2	Spec. Funct. 3	0	OR-4 (a)	0	System Det 2	0	Plan 2	0	Ext. Perm 2	0	Offset 1 (7-Wire)	0	EV-B	72	2
3	Spec. Funct. 4	0	OR-4 (b)	0	System Det 3	0	Plan 3	0	Reserved	0	Offset 2 (7-Wire)	0	EV-C	73	3
4	NAND-3 (a)	0	OR-5 (a)	0	System Det 4	0	Plan 4	0	Set Clock	0	Offset 3 (7-Wire)	0	EV-D	74	4
5	NAND-3 (b)	0	OR-5 (b)	0	System Det 5	0	Plan 5	0	Stop Time	82	Free (7-Wire)	0	RR-1	51	5
6	NAND-4 (a)	0	OR-6 (a)	0	System Det 6	0	Plan 6	0	Flash Sense	81	Flash (7-Wire)	0	RR-2	52	6
7	NAND-4 (b)	0	OR-6 (b)	0	System Det 7	0	Plan 7	0	Manual Enable	0	Excl. Ped Omit	0	Spec. Event 1	0	7
8	OR-7 (a)	0	Fig 3 Diamond	0	System Det 8	0	Plan 8	0	Man. Advance	0	NOT-1	0	Spec. Event 2	0	8
9	OR-7 (b)	0	Fig 4 Diamond	0	Max Inhibit (nema)	0	Plan 9	0	External Alarm	0	NOT-2	0	External Lag	0	9
A	OR-7 (c)	0	AND-4 (a)	0	Force A (nema)	0	DELAY-A	0	Phase Bank 2	0	OR-1 (a)	0	AND-1 (a)	0	A
B	OR-7 (d)	0	AND-4 (b)	0	Force B (nema)	0	DELAY-B	0	Phase Bank 3	0	OR-1 (b)	0	AND-1 (b)	0	B
C	OR-8 (a)	0	NAND-1 (a)	0	C.N.A. (nema)	0	DELAY-C	0	Overlap Set 2	0	OR-2 (a)	0	AND-2 (a)	0	C
D	OR-8 (b)	0	NAND-1 (b)	0	Hold (nema)	0	DELAY-D	0	Overlap Set 3	0	OR-2 (b)	0	AND-2 (b)	0	D
E	OR-8 (c)	0	NAND-2 (a)	0	Max Recall	0	DELAY-E	0	Detector Set 2	0	OR-3 (a)	0	AND-3 (a)	0	E
F	OR-8 (d)	0	NAND-2 (b)	0	Min Recall	0	DELAY-F	0	Detector Set 3	0	OR-3 (b)	0	AND-3 (b)	0	F

Assignable Inputs

<C+0+E=126>

Row	Column 9		Column A		Column B		Column C		Column D		Column E		Column F		Row
0	Phase ON - 1	0	Preempt Fail	0	Flasher 0	0	Free	0	NOT-1	0	TOD Out 1	0	Dial 2 (7-Wire)	0	0
1	Phase ON - 2	0	Sp Evnt Out 1	0	Flasher 1	0	Plan 1	0	OR-1	0	TOD Out 2	0	Dial 3 (7-Wire)	0	1
2	Phase ON - 3	0	Sp Evnt Out 2	0	Fast Flasher	0	Plan 2	0	OR-2	0	TOD Out 3	0	Offset 1 (7-Wire)	0	2
3	Phase ON - 4	0	Sp Evnt Out 3	0	Fig 3 Diamond	0	Plan 3	0	OR-3	0	TOD Out 4	0	Offset 2 (7-Wire)	0	3
4	Phase ON - 5	0	Sp Evnt Out 4	0	Fig 4 Diamond	0	Plan 4	0	AND-1	0	TOD Out 5	0	Offset 3 (7-Wire)	0	4
5	Phase ON - 6	0	Sp Evnt Out 5	0			Plan 5	0	AND-2	0	TOD Out 6	0	Free (7-Wire)	0	5
6	Phase ON - 7	0	Sp Evnt Out 6	0			Plan 6	0	AND-3	0	TOD Out 7	0	Flash (7-Wire)	0	6
7	Phase ON - 8	0	Sp Evnt Out 7	0			Plan 7	0	NOT-2	0	TOD Out 8	0	Preempt	0	7
8	Ph. Check - 1	0	Sp Evnt Out 8	0	NOT-3	0	Plan 8	0	EV-A	0	Adv. Warn - 1	0	Low Priority A	0	8
9	Ph. Check - 2	0			NOT-4	0	Plan 9	0	EV-B	0	Adv. Warn - 2	0	Low Priority B	0	9
A	Ph. Check - 3	0	Detector Fail	0	OR-4	0	Spec. Funct. 3	0	EV-C	0	DELAY-A	0	Low Priority C	0	A
B	Ph. Check - 4	0	Spec. Funct. 1	0	OR-5	0	Spec. Funct. 4	0	EV-D	0	DELAY-B	0	Low Priority D	0	B
C	Ph. Check - 5	0	Spec. Funct. 2	0	OR-6	0	NAND-3	0	RR-1	0	DELAY-C	0			C
D	Ph. Check - 6	0	Central Control	0	AND-4	0	NAND-4	0	RR-2	0	DELAY-D	0			D
E	Ph. Check - 7	0	Excl. Ped DW	0	NAND-1	0	OR-7	0	Spec. Event 1	0	DELAY-E	0			E
F	Ph. Check - 8	0	Excl. Ped WK	0	NAND-2	0	OR-8	0	Spec. Event 2	0	DELAY-F	0			F

Assignable Outputs

<C+0+E=127>

Row	Phase Names ---->	Phase							
		1	2	3	4	5	6	7	8
0	Ped Walk	0	0	0	0	0	0	0	0
1	Ped FDW	0	0	0	0	0	0	0	0
2	Min Green	0	0	0	0	0	0	0	0
3	Type 3 Disconnect	0	0	0	0	0	0	0	0
4	Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Veh Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	Max Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	Max Limit	0	0	0	0	0	0	0	0
9	Max Limit 2	0	0	0	0	0	0	0	0
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	PE Min Ped FDW	0	0	0	0	0	0	0	0
C	Cond Serv Check	0	0	0	0	0	0	0	0
D	Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
F	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Phase Timing - Bank 2 <C+0+F=2>

Row	Phase Names ---->	Phase							
		1	2	3	4	5	6	7	8
0	Ped Walk	0	0	0	0	0	0	0	0
1	Ped FDW	0	0	0	0	0	0	0	0
2	Min Green	0	0	0	0	0	0	0	0
3	Type 3 Disconnect	0	0	0	0	0	0	0	0
4	Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Veh Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	Max Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	Max Limit	0	0	0	0	0	0	0	0
9	Max Limit 2	0	0	0	0	0	0	0	0
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	PE Min Ped FDW	0	0	0	0	0	0	0	0
C	Cond Serv Check	0	0	0	0	0	0	0	0
D	Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
F	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Phase Timing - Bank 3 <C+0+F=3>

	9	A	B	C	D
Phase 1	0	0	0	0	0.0
Phase 2	0	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	0	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	0	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	0	0	0	0	0.0
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing

	9	A	B	C	D
Phase 1	0	0	0	0	0.0
Phase 2	0	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	0	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	0	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	0	0	0	0	0.0
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing

Transition Type
 0.X = Shortway
 1.X = Lengthen
 X.1 thru X.4 =
 Number of
 cycles when
 lengthing

Transition Type	0.3	<C/5+1+9>
-----------------	-----	-----------

TBC Transition

Lag Hold Phases		<C/5+1+A>
-----------------	--	-----------

Coordinated Lag Hold Phases

Daylight Savings
 Date
 If set to all zeros,
 standard dates
 will be used.

Begin Month	0	<C/5+2+A>
Begin Week	0	<C/5+2+B>
End Month	0	<C/5+2+C>
End Week	0	<C/5+2+D>

Daylight Savings Time

Time B4 Yellow	0.0	<F/1+C+E>
Phase Number	0	<F/1+C+F>

Advance Warning Beacon - Sign 1

Time B4 Yellow	0.0	<F/1+D+E>
Phase Number	0	<F/1+D+F>

Advance Warning Beacon - Sign 2

Column Numbers ---->		0	1	2	3	1	3
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0		39	45 7	2	123	0.0	0.0
1		40	45 7	6	123	0.0	0.0
2		41	45 7	4	123	0.0	0.0
3		42	45 7	8	123	0.0	0.0
4		43	45 7	2	123	0.0	0.0
5		44	45 7	6	123	0.0	0.0
6		45	45 7	4	123	0.0	0.0
7		46	45 7	8	123	0.0	0.0
8		47	45 7	2	123	0.0	0.0
9		48	45 7	6	123	0.0	0.0
A		49	45 7	4	123	0.0	0.0
B		50	45 7	8	123	0.0	0.0
C		55	45 7	5	123	0.0	0.0
D		56	45 7	1	123	0.0	0.0
E		57	45 7	7	123	0.0	0.0
F		58	45 7	3	123	0.0	0.0

Column Numbers ---->		4	5	6	7	2	4
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0		59	45 7	5	123	0.0	0.0
1		60	45 7	1	123	0.0	0.0
2		61	45 7	7	123	0.0	0.0
3		62	45 7	3	123	0.0	0.0
4		63	45 7	2	123	0.0	0.0
5		64	45 7	6	123	0.0	0.0
6		65	45 7	4	123	0.0	0.0
7		66	45 7	8	123	0.0	0.0
8		67	2	2	123	0.0	0.0
9		68	2	6	123	0.0	0.0
A		69	2	4	123	0.0	0.0
B		70	2	3	123	0.0	0.0
C		76	45 7	2	123	0.0	0.0
D		77	45 7	6	123	0.0	0.0
E		78	45 7	4	123	0.0	0.0
F		79	45 7	8	123	0.0	0.0

Detector Assignments <C+0+E=126>

Detector Attributes

- 1 = Full Time Delay
- 2 = Ped Call
- 3 =
- 4 = Count
- 5 = Extension
- 6 = Type 3
- 7 = Calling
- 8 = Alternate

Det. Assignments

- 1 = Det. Set 1
- 2 = Det. Set 2
- 3 = Det. Set 3
- 4 =
- 5 =
- 6 = Failure - Min Recall
- 7 = Failure - Max Recall
- 8 = Report on Failure

<C+0+D=0>

Column Numbers ---->		Ped / Phase / Overlap								Row
		1	2	3	4	5	6	7	8	
Walk		0	0	0	0	0	0	0	0	0
Don't Walk		0	0	0	0	0	0	0	0	1
Phase Green		0	0	0	0	0	0	0	0	2
Phase Yellow		0	0	0	0	0	0	0	0	3
Phase Red		0	0	0	0	0	0	0	0	4
Overlap Green		0	0	0	0	0	0	0	0	5
Overlap Yellow		0	0	0	0	0	0	0	0	6
Overlap Red		0	0	0	0	0	0	0	0	7

Redirect Phase Outputs <C+0+E=127>

Cabinet Type | 0 <E/125+D+0>

Enable Redirection
(Enable Redirection = 30)

Max OFF (minutes) | 20 <D/0+0+1>

Max ON (minutes) | 7 <D/0+0+2>

Detector Failure Monitor

Disable Alarms

- 1 = Stop Time
- 2 = Flash Sense
- 3 = Keyboard Entry
- 4 = Manual Plan
- 5 = Police Control
- 6 = External Alarm
- 7 = Detector Failure
- 8 =

	B	Row
DELAY-A	0	A
DELAY-B	0	B
DELAY-C	0	C
DELAY-D	0	D
DELAY-E	0	E
DELAY-F	0	F

Delay Logic Times
<C+0+D=0> (seconds)

Omit Alarm | <C/5+F+0>

Disable Alarm Reporting

Row	Time	Plan	Offset	Day of Week
0	00 : 00	E	A	1234567
1	14 : 30	8	A	23456
2	16 : 30	E	A	23456
3	10 : 30	9	A	1 7
4	16 : 00	E	A	1 7
5	00 : 00	0	0	
6	00 : 00	0	0	
7	00 : 00	0	0	
8	00 : 00	0	0	
9	00 : 00	0	0	
A	00 : 00	0	0	
B	00 : 00	0	0	
C	00 : 00	0	0	
D	00 : 00	0	0	
E	00 : 00	0	0	
F	00 : 00	0	0	

TOD Coordination <C+0+9=0.1>
(Bank 1)

Time	Funct	Day of Week
00 : 00	0	
00 : 00	0	
00 : 00	0	
00 : 00	0	
00 : 00	0	
00 : 00	0	
00 : 00	0	
00 : 00	0	
00 : 00	0	
00 : 00	0	
00 : 00	0	
00 : 00	0	
00 : 00	0	
00 : 00	0	
00 : 00	0	
00 : 00	0	
00 : 00	0	

TOD Function <C+0+7=0.1>

Column 4	Phases/Bits

<C+0+E=27>

Day	Year	Month	Holiday Type
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	

Holiday Dates <C+0+8=1.1>
(Bank 1)

Time	Plan	Offset	Holiday Type
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	

Holiday Events <C+0+9=1.1>
(Bank 1)

- T.O.D. Functions
 0 =
 1 = Red Lock
 2 = Yellow Lock
 3 = Veh Min Recall
 4 = Ped Recall
 5 =
 6 = Rest In Walk
 7 = Red Rest
 8 = Double Entry
 9 = Veh Max Recall
 A = Veh Soft Recall
 B = Maximum 2
 C = Conditional Service
 D = Free Lag Phases
 E = Bit 1 - Local Override
 Bit 4 - Disable Detector
 OFF Monitor
 Bit 5 - Disable Low
 Priority Preempt
 Bit 7 - Detector Count
 Monitor
 Bit 8 - Real Time Split
 Monitor
 F = Output Bits 1 thru 8

Row	Time	Plan	Offset	Day of Week
0	00 : 00	0	0	
1	00 : 00	0	0	
2	00 : 00	0	0	
3	00 : 00	0	0	
4	00 : 00	0	0	
5	00 : 00	0	0	
6	00 : 00	0	0	
7	00 : 00	0	0	
8	00 : 00	0	0	
9	00 : 00	0	0	
A	00 : 00	0	0	
B	00 : 00	0	0	
C	00 : 00	0	0	
D	00 : 00	0	0	
E	00 : 00	0	0	
F	00 : 00	0	0	

TOD Coordination <C+0+9=0.2>
(Bank 2)

Time	Funct	Holiday Type
00 : 00	0	
00 : 00	0	
00 : 00	0	
00 : 00	0	
00 : 00	0	
00 : 00	0	
00 : 00	0	
00 : 00	0	
00 : 00	0	
00 : 00	0	
00 : 00	0	
00 : 00	0	
00 : 00	0	
00 : 00	0	
00 : 00	0	
00 : 00	0	

Holiday TOD Function <C+0+7=0.2>

Column 4	Phases/Bits

<C+0+E=28>

Day	Year	Month	Holiday Type
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	

Holiday Dates <C+0+8=1.2>
(Bank 2)

Time	Plan	Offset	Holiday Type
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	

Holiday Events <C+0+9=1.2>
(Bank 2)

- Plan Select
 1 thru 9 = Coordination
 Plan 1 thru 9
 14 or E = Free
 15 or F = Flash
- Offset Select
 A = Offset A
 B = Offset B
 C = Offset C
- Month Select
 1 = January
 2 = February
 3 = March
 4 = April
 5 = May
 6 = June
 7 = July
 8 = August
 9 = September
 A = October
 B = November
 C = December

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Special Event Schedule -- Table 1

<C+0+E=27>

Notes: _____

0 <E/27+5+F>
Limited Service Interval

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Special Event Schedule -- Table 2

<C+0+E=28>

Notes: _____

0 <E/28+5+F>
Limited Service Interval

Min Time (seconds) | 2 | <F/1+0+8>
Min Green Before PE Force Off

Max Time (minutes) | 2 | <F/1+0+9>
Max Preempt Time Before Failure

Min Time (seconds) | 0 | <F/1+0+A>
Min Time Between Same Preempts
 (Does Not Apply To Railroad Preempt)

Low Pri. Channel | | <E/125+C+8>
Disable Low Priority Channel

- Low Priority
 1 = Channel A
 2 = Channel B
 3 = Channel C
 4 = Channel D

Delay Time (seconds) | 0 | <F/1+A+D>
Bus Delay

Max Time (seconds) | 0 | <F/1+A+E>
Max Early Green

Max Time (seconds) | 0 | <F/1+A+F>
Max Green Extension

Row	Time	Headway	Direction	Day of Week
0	00 : 00	0	0	_____
1	00 : 00	0	0	_____
2	00 : 00	0	0	_____
3	00 : 00	0	0	_____
4	00 : 00	0	0	_____
5	00 : 00	0	0	_____
6	00 : 00	0	0	_____
7	00 : 00	0	0	_____
8	00 : 00	0	0	_____
9	00 : 00	0	0	_____
A	00 : 00	0	0	_____
B	00 : 00	0	0	_____
C	00 : 00	0	0	_____
D	00 : 00	0	0	_____
E	00 : 00	0	0	_____
F	00 : 00	0	0	_____

- Headway Time
 (minutes)
 1 thru 9 = 1 thru 9
 A = 10
 B = 11
 C = 12
 D = 13
 E = 14
 F = 15

Headway <C+0+9=2.1>

Low Priority Preemption (Bus Priority)

Only available with *Program 233RV2.B* (and above)

Note: Also see "Time of Day Functions", Function E, Bit 5 (Disable Low Priority)

INTERSECTION: 139 Nirvana/Main

Group Assignment: **NONE**
 Field Master Assignment: **NONE**
 System Reference Number: **139**

N/S Street Name: **Nirvana Ave**
 E/W Street Name: **Main St**

Last Database Change: **5/20/2021 9:41**

Change Record					
Change	By	Date	Change	By	Date

Notes: _____

Manual Plan
 0 = Automatic
 1-9 = Plan 1-9
 14 = Free
 15 = Flash

Manual Offset
 0 = Automatic
 1 = Offset A
 2 = Offset B
 3 = Offset C

Drop Number	1	<C/0+0+0>
Zone Number	1	<C/0+0+1>
Area Number	0	<C/0+0+2>
Area Address	144	<C/0+0+3>
QuicNet Channel	8018:10.242.20	(QuicNet)

Manual Plan		<C/0+A+1>
Manual Offset		<C/0+B+1>

Flash Start	0	<F/1+0+E>
Red Revert	3.0	<F/1+0+F>
All Red Start	5.0	<F/1+C+0>

Exclusive Walk	0	<F/1+0+0>
Exclusive FDW	0	<F/1+0+1>
All Red Clear	0.0	<F/1+0+2>

Communication Addresses

Manual Selection

Start / Revert Times

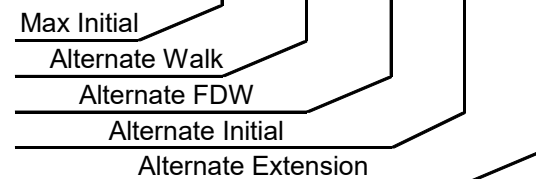
Exclusive Ped Phase

(Outputs specified in Assignable
 Outputs at E/127+A+E & F)

Row	Column Numbers ---->	Phase							
		1	2	3	4	5	6	7	8
0	Ped Walk	0	0	0	7	0	7	0	0
1	Ped FDW	0	0	0	33	0	16	0	0
2	Min Green	0	10	0	4	10	10	0	0
3	Type 3 Disconnect	0	0	0	0	0	0	0	0
4	Added per Vehicle	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0
5	Veh Extension	0.0	5.0	0.0	3.0	2.0	5.5	0.0	0.0
6	Max Gap	0.0	5.0	0.0	3.0	2.0	6.2	0.0	0.0
7	Min Gap	0.0	5.0	0.0	3.0	2.0	2.0	0.0	0.0
8	Max Limit	0	40	0	30	30	40	0	0
9	Max Limit 2	0	0	0	0	0	0	0	0
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	PE Min Ped FDW	0	0	0	0	0	0	0	0
C	Cond Serv Check	0	0	0	0	0	0	0	0
D	Reduce Every	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0
E	Yellow Change	0.0	5.1	0.0	3.2	3.2	5.1	0.0	0.0
F	Red Clear	0.0	1.6	0.0	1.0	1.0	1.6	0.0	0.0

Phase Timing - Bank 1 <C+0+F=1>

	9	A	B	C	D
Phase 1	0	0	0	0	0.0
Phase 2	20	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	20	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	20	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	20	0	0	0	0.0



Alternate Timing <C+0+F=1>

	E
RR-1 Delay	0
RR-1 Clear	0
EV-A Delay	0
EV-A Clear	0
EV-B Delay	0
EV-B Clear	0
EV-C Delay	0
EV-C Clear	0
EV-D Delay	0
EV-D Clear	0
RR-2 Delay	0
RR-2 Clear	0
View EV Delay	---
View EV Clear	---
View RR Delay	---
View RR Clear	---

Preempt Timing

	F	Row
Permit	<u>2 456</u>	0
Red Lock	_____	1
Yellow Lock	_____	2
Min Recall	<u>2 6</u>	3
Ped Recall	_____	4
View Set Peds	-----	5
Rest In Walk	_____	6
Red Rest	_____	7
Dual Entry	_____	8
Max Recall	_____	9
Soft Recall	_____	A
Max 2	_____	B
Cond. Service	_____	C
Man Cntrl Calls	_____	D
Yellow Start	_____	E
First Phases	<u>2 6</u>	F

Phase Functions <C+0+F=1>

		Overlap							
Column Numbers ---->		1	2	3	4	5	6	7	8
Row	Overlap Name ---->								
0	Load Switch Number	0	0	0	0	0	0	0	0
1	Veh Set 1 - Phases								
2	Veh Set 2 - Phases								
3	Veh Set 3 - Phases								
4	Neg Veh Phases								
5	Neg Ped Phases								
6	Green Omit Phases								
7	Green Clear Omit Phs.								
8									
9									
A									
B									
C									
D	Green Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
F	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Overlap Assignments <C+0+E=29>

- Extra 1 Flags**
 1 = TBC Type 1
 2 = NEMA Ext. Coord
 3 = Auto Daylight Savings
 4 = Solid FDW on EV
 5 = Extended Status
 6 = International Ped
 7 = Flash - Clear Outputs
 8 = Split Ring

- Extra 2 Flags**
 1 = AWB During Initial
 2 = LMU Installed
 3 = Disable Min Walk
 4 = QuicNet/4 System
 5 = Ignore P/P on EV
 6 =
 7 = Allow QuicNet PE
 8 =

	C	Row
EV-A	0	0
EV-B	0	1
EV-C	0	2
EV-D	0	3
RR-1 *	---	4
RR-2 *	---	5
SE-1	0	6
SE-2	0	7

Preempt Priority
 <C+0+E=125>
 (* RR-1 is always Highest, and RR-2 is always Second Highest)

Row	Column Numbers ---->	E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Flash to PE Circuits	
6	Flash Entry Phases	
7	Disable Yellow Range	
8	Disable Ovp Yel Range	
9	Overlap Yellow Flash	
A	EV-A Phases	2_5
B	EV-B Phases	4
C	EV-C Phases	6
D	EV-D Phases	
E	Extra 1 Config. Bits	1_3_5
F	IC Select (Interconnect)	2

Configuration <C+0+E=125>

	F
Ext. Permit 1 Phases	
Ext. Permit 2 Phases	
Exclusive Ped Assign	
Preempt Non-Lock	12345678
Ped for 2P Output	
Ped for 6P Output	6
Ped for 4P Output	4
Ped for 8P Output	
Yellow Flash Phases	
Low Priority A Phases	
Low Priority B Phases	
Low Priority C Phases	
Low Priority D Phases	
Restricted Phases	
Extra 2 Config. Bits	3

Configuration <C+0+E=125>

	F
Fast Green Flash Phase	
Green Flash Phases	
Flashing Walk Phases	
Guaranteed Passage	
Simultaneous Gap Term	12345678
Sequential Timing	
Advance Walk Phases	
Delay Walk Phases	
External Recall	
Start-up Overlap Green	
Max Extension	
Inhibit Ped Reservice	
Semi-Actuated	
Start-up Overlap Yellow	
Start-up Vehicle Calls	12345678
Start-up Ped Calls	12345678

Specials <C+0+F=2>

- Flash to PE & PE Non-Lock**
 1 = EV A 5 = RR 1
 2 = EV B 6 = RR 2
 3 = EV C 7 = SE 1
 4 = EV D 8 = SE 2

- IC Select Flags**
 1 =
 2 = Modem
 3 = 7-Wire Slave
 4 = Flash / Free
 5 =
 6 = Simplex Master
 7 = 7-Wire Master
 8 = Offset Interrupter

	2	Row
Phase 1	10	1
Phase 2	10	2
Phase 3	10	3
Phase 4	10	4
Phase 5	10	5
Phase 6	10	6
Phase 7	10	7
Phase 8	10	8

Coordination Transition Minimums
 <C+0+C=5>

Column Numbers ---->		Plan								
Row	Plan Name ---->	1	2	3	4	5	6	7	8	9
0	Cycle Length	64	64	0	0	0	110	110	90	90
1	Phase 1 - ForceOff	0	0	0	0	0	0	0	0	0
2	Phase 2 - ForceOff	0	0	0	0	0	0	0	0	0
3	Phase 3 - ForceOff	0	0	0	0	0	0	0	0	0
4	Phase 4 - ForceOff	41	22	0	0	0	38	38	28	28
5	Phase 5 - ForceOff	19	0	0	0	0	73	68	3	0
6	Phase 6 - ForceOff	0	45	0	0	0	0	0	65	65
7	Phase 7 - ForceOff	0	0	0	0	0	0	0	0	0
8	Phase 8 - ForceOff	0	0	0	0	0	0	0	0	0
9	Ring Offset	0	0	0	0	0	0	0	0	0
A	Offset 1	0	0	0	0	0	102	59	37	87
B	Offset 2	0	0	0	0	0	0	0	0	0
C	Offset 3	0	0	0	0	0	0	0	0	0
D	Perm 1 - End	0	0	0	0	0	5	5	5	5
E	Hold Release	255	255	0	0	0	255	90	255	255
F	Zone Offset	0	0	0	0	0	0	0	0	0

Coordination - Bank 1 <C+0+C=1>

0	Ped Adjustment	9	9	0	0	0	5	5	10	10
1	Perm 2 - Start	0	0	0	0	0	0	0	0	0
2	Perm 2 - End	0	0	0	0	0	0	0	0	0
3	Perm 3 - Start	0	0	0	0	0	0	0	0	0
4	Perm 3 - End	0	0	0	0	0	0	0	0	0
5	Reservice Time	0	0	0	0	0	0	0	0	0
6	Reservice Phases									
7										
8	Pretimed Phases									
9	Max Recall									
A	Perm 1 Veh Phase	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678
B	Perm 1 Ped Phase	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678
C	Perm 2 Veh Phase									
D	Perm 2 Ped Phase									
E	Perm 3 Veh Phase									
F	Perm 3 Ped Phase									

Coordination - Bank 2 <C+0+C=2>

Coord Extra
 1 = Programmed WALK Time for Sync Phases
 2 = Always Terminate Sync Phase Peds

Row		E	Row
0			0
1	Plan 1 - Sync	6	1
2	Plan 2 - Sync	2 5	2
3	Plan 3 - Sync		3
4	Plan 4 - Sync		4
5	Plan 5 - Sync		5
6	Plan 6 - Sync	2 6	6
7	Plan 7 - Sync	2 6	7
8	Plan 8 - Sync	2 5	8
9	Plan 9 - Sync	2 5	9
A	NEMA Sync		A
B	NEMA Hold		B
C			C
D			D
E	Coord Extra		E
F			F

Sync Phases <C+0+C=1>

Row		F	Row
0	Free Lag	2 4 6	0
1	Plan 1 - Lag	2 45	1
2	Plan 2 - Lag	2 45	2
3	Plan 3 - Lag		3
4	Plan 4 - Lag		4
5	Plan 5 - Lag		5
6	Plan 6 - Lag	2 4 6	6
7	Plan 7 - Lag	2 4 6	7
8	Plan 8 - Lag	2 45	8
9	Plan 9 - Lag	2 45	9
A	External Lag		A
B			B
C			C
D			D
E			E
F			F

Lag Phases <C+0+C=1>

Row	Column 9	Column A	Column B	Column C	Column D	Column E	Column F	Row							
0	Spec. Funct. 1	0	NOT-3	0	Max 2	0	Pretimed	0	Set Monday	0	Dial 2 (7-Wire)	0	Sim Term	0	0
1	Spec. Funct. 2	0	NOT-4	0	System Det 1	0	Plan 1	0	Ext. Perm 1	0	Dial 3 (7-Wire)	0	EV-A	71	1
2	Spec. Funct. 3	0	OR-4 (a)	0	System Det 2	0	Plan 2	0	Ext. Perm 2	0	Offset 1 (7-Wire)	0	EV-B	72	2
3	Spec. Funct. 4	0	OR-4 (b)	0	System Det 3	0	Plan 3	0	Reserved	0	Offset 2 (7-Wire)	0	EV-C	73	3
4	NAND-3 (a)	0	OR-5 (a)	0	System Det 4	0	Plan 4	0	Set Clock	0	Offset 3 (7-Wire)	0	EV-D	74	4
5	NAND-3 (b)	0	OR-5 (b)	0	System Det 5	0	Plan 5	0	Stop Time	82	Free (7-Wire)	0	RR-1	51	5
6	NAND-4 (a)	0	OR-6 (a)	0	System Det 6	0	Plan 6	0	Flash Sense	81	Flash (7-Wire)	0	RR-2	52	6
7	NAND-4 (b)	0	OR-6 (b)	0	System Det 7	0	Plan 7	0	Manual Enable	0	Excl. Ped Omit	0	Spec. Event 1	0	7
8	OR-7 (a)	0	Fig 3 Diamond	0	System Det 8	0	Plan 8	0	Man. Advance	0	NOT-1	0	Spec. Event 2	0	8
9	OR-7 (b)	0	Fig 4 Diamond	0	Max Inhibit (nema)	0	Plan 9	0	External Alarm	0	NOT-2	0	External Lag	0	9
A	OR-7 (c)	0	AND-4 (a)	0	Force A (nema)	0	DELAY-A	0	Phase Bank 2	0	OR-1 (a)	0	AND-1 (a)	0	A
B	OR-7 (d)	0	AND-4 (b)	0	Force B (nema)	0	DELAY-B	0	Phase Bank 3	0	OR-1 (b)	0	AND-1 (b)	0	B
C	OR-8 (a)	0	NAND-1 (a)	0	C.N.A. (nema)	0	DELAY-C	0	Overlap Set 2	0	OR-2 (a)	0	AND-2 (a)	0	C
D	OR-8 (b)	0	NAND-1 (b)	0	Hold (nema)	0	DELAY-D	0	Overlap Set 3	0	OR-2 (b)	0	AND-2 (b)	0	D
E	OR-8 (c)	0	NAND-2 (a)	0	Max Recall	0	DELAY-E	0	Detector Set 2	0	OR-3 (a)	0	AND-3 (a)	0	E
F	OR-8 (d)	0	NAND-2 (b)	0	Min Recall	0	DELAY-F	0	Detector Set 3	0	OR-3 (b)	0	AND-3 (b)	0	F

Assignable Inputs

<C+0+E=126>

Row	Column 9	Column A	Column B	Column C	Column D	Column E	Column F	Row							
0	Phase ON - 1	0	Preempt Fail	0	Flasher 0	0	Free	0	NOT-1	0	TOD Out 1	0	Dial 2 (7-Wire)	0	0
1	Phase ON - 2	0	Sp Evnt Out 1	0	Flasher 1	0	Plan 1	0	OR-1	0	TOD Out 2	0	Dial 3 (7-Wire)	0	1
2	Phase ON - 3	0	Sp Evnt Out 2	0	Fast Flasher	0	Plan 2	0	OR-2	0	TOD Out 3	0	Offset 1 (7-Wire)	0	2
3	Phase ON - 4	0	Sp Evnt Out 3	0	Fig 3 Diamond	0	Plan 3	0	OR-3	0	TOD Out 4	0	Offset 2 (7-Wire)	0	3
4	Phase ON - 5	0	Sp Evnt Out 4	0	Fig 4 Diamond	0	Plan 4	0	AND-1	0	TOD Out 5	0	Offset 3 (7-Wire)	0	4
5	Phase ON - 6	0	Sp Evnt Out 5	0			Plan 5	0	AND-2	0	TOD Out 6	0	Free (7-Wire)	0	5
6	Phase ON - 7	0	Sp Evnt Out 6	0			Plan 6	0	AND-3	0	TOD Out 7	0	Flash (7-Wire)	0	6
7	Phase ON - 8	0	Sp Evnt Out 7	0			Plan 7	0	NOT-2	0	TOD Out 8	0	Preempt	0	7
8	Ph. Check - 1	0	Sp Evnt Out 8	0	NOT-3	0	Plan 8	0	EV-A	0	Adv. Warn - 1	0	Low Priority A	0	8
9	Ph. Check - 2	0			NOT-4	0	Plan 9	0	EV-B	0	Adv. Warn - 2	0	Low Priority B	0	9
A	Ph. Check - 3	0	Detector Fail	0	OR-4	0	Spec. Funct. 3	0	EV-C	0	DELAY-A	0	Low Priority C	0	A
B	Ph. Check - 4	0	Spec. Funct. 1	0	OR-5	0	Spec. Funct. 4	0	EV-D	0	DELAY-B	0	Low Priority D	0	B
C	Ph. Check - 5	0	Spec. Funct. 2	0	OR-6	0	NAND-3	0	RR-1	0	DELAY-C	0			C
D	Ph. Check - 6	0	Central Control	0	AND-4	0	NAND-4	0	RR-2	0	DELAY-D	0			D
E	Ph. Check - 7	0	Excl. Ped DW	0	NAND-1	0	OR-7	0	Spec. Event 1	0	DELAY-E	0			E
F	Ph. Check - 8	0	Excl. Ped WK	0	NAND-2	0	OR-8	0	Spec. Event 2	0	DELAY-F	0			F

Assignable Outputs

<C+0+E=127>

Column Numbers ---->		Phase							
Row	Phase Names ---->	1	2	3	4	5	6	7	8
0	Ped Walk	0	0	0	0	0	0	0	0
1	Ped FDW	0	0	0	0	0	0	0	0
2	Min Green	0	0	0	0	0	0	0	0
3	Type 3 Disconnect	0	0	0	0	0	0	0	0
4	Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Veh Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	Max Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	Max Limit	0	0	0	0	0	0	0	0
9	Max Limit 2	0	0	0	0	0	0	0	0
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	PE Min Ped FDW	0	0	0	0	0	0	0	0
C	Cond Serv Check	0	0	0	0	0	0	0	0
D	Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
F	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Phase Timing - Bank 2 <C+0+F=2>

	9	A	B	C	D
Phase 1	0	0	0	0	0.0
Phase 2	0	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	0	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	0	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	0	0	0	0	0.0

Alternate Timing

Transition Type
 0.X = Shortway
 1.X = Lengthen
 X.1 thru X.4 =
 Number of
 cycles when
 lengthing

Transition Type **0.3** <C/5+1+9>
TBC Transition

Lag Hold Phases _____ <C/5+1+A>
Coordinated Lag Hold Phases

Daylight Savings
 Date
 If set to all zeros,
 standard dates
 will be used.

Begin Month **0** <C/5+2+A>
 Begin Week **0** <C/5+2+B>
 End Month **0** <C/5+2+C>
 End Week **0** <C/5+2+D>
Daylight Savings Time

Row		1	2	3	4	5	6	7	8
0	Ped Walk	0	0	0	0	0	0	0	0
1	Ped FDW	0	0	0	0	0	0	0	0
2	Min Green	0	0	0	0	0	0	0	0
3	Type 3 Disconnect	0	0	0	0	0	0	0	0
4	Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Veh Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	Max Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	Max Limit	0	0	0	0	0	0	0	0
9	Max Limit 2	0	0	0	0	0	0	0	0
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	PE Min Ped FDW	0	0	0	0	0	0	0	0
C	Cond Serv Check	0	0	0	0	0	0	0	0
D	Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
F	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Phase Timing - Bank 3 <C+0+F=3>

	9	A	B	C	D
Phase 1	0	0	0	0	0.0
Phase 2	0	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	0	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	0	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	0	0	0	0	0.0

Alternate Timing

Time B4 Yellow **0.0** <F/1+C+E>
 Phase Number **0** <F/1+C+F>
Advance Warning Beacon - Sign 1

Time B4 Yellow **0.0** <F/1+D+E>
 Phase Number **0** <F/1+D+F>
Advance Warning Beacon - Sign 2

Column Numbers ---->		0	1	2	3	1	3
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0		39	45 7	2	123	0.0	0.0
1		40	45 7	6	123	0.0	0.0
2		41	45 7	4	123	0.0	0.0
3		42	45 7	8	123	0.0	0.0
4		43	45 7	2	123	0.0	0.0
5		44	45 7	6	123	0.0	0.0
6		45	45 7	4	123	0.0	0.0
7		46	45 7	8	123	0.0	0.0
8		47	45 7	2	123	0.0	1.5
9		48	45 7	6	123	10.0	0.0
A		49	45 7	4	123	6.0	0.0
B		50	45 7	8	123	0.0	0.0
C		55	45 7	5	123	0.0	0.0
D		56	45 7	1	123	0.0	0.0
E		57	45 7	7	123	0.0	0.0
F		58	45 7	3	123	0.0	0.0

Column Numbers ---->		Ped / Phase / Overlap								Row
		1	2	3	4	5	6	7	8	
Walk		0	0	0	0	0	0	0	0	0
Don't Walk		0	0	0	0	0	0	0	0	1
Phase Green		0	0	0	0	0	0	0	0	2
Phase Yellow		0	0	0	0	0	0	0	0	3
Phase Red		0	0	0	0	0	0	0	0	4
Overlap Green		0	0	0	0	0	0	0	0	5
Overlap Yellow		0	0	0	0	0	0	0	0	6
Overlap Red		0	0	0	0	0	0	0	0	7

Redirect Phase Outputs <C+0+E=127>

Cabinet Type <E/125+D+0>

Enable Redirection
(Enable Redirection = 30)

Max OFF (minutes) <D/0+0+1>

Max ON (minutes) <D/0+0+2>

Detector Failure Monitor

Column Numbers ---->		4	5	6	7	2	4
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0		59	45 7	5	123	2.0	1.0
1		60	45 7	1	123	0.0	0.0
2		61	45 7	7	123	0.0	0.0
3		62	45 7	3	123	0.0	0.0
4		63	45 7	2	123	0.0	0.0
5		64	45 7	6	123	0.0	0.0
6		65	45 7	4	123	0.0	0.0
7		66	45 7	8	123	10.0	0.0
8		67	2	2	123	3.0	1.5
9		68	2	6	123	0.0	0.0
A		69	2	4	123	0.0	0.0
B		70	2	8	123	0.0	0.0
C		76	45 7	2	123	0.0	0.0
D		77	45 7	6	123	0.0	0.0
E		78	45 7	4	123	0.0	0.0
F		79	45 7	8	123	0.0	0.0

Detector Attributes

- 1 = Full Time Delay
- 2 = Ped Call
- 3 =
- 4 = Count
- 5 = Extension
- 6 = Type 3
- 7 = Calling
- 8 = Alternate

Det. Assignments

- 1 = Det. Set 1
- 2 = Det. Set 2
- 3 = Det. Set 3
- 4 =
- 5 =
- 6 = Failure - Min Recall
- 7 = Failure - Max Recall
- 8 = Report on Failure

Disable Alarms

- 1 = Stop Time
- 2 = Flash Sense
- 3 = Keyboard Entry
- 4 = Manual Plan
- 5 = Police Control
- 6 = External Alarm
- 7 = Detector Failure
- 8 =

	B	Row
DELAY-A	0	A
DELAY-B	0	B
DELAY-C	0	C
DELAY-D	0	D
DELAY-E	0	E
DELAY-F	0	F

Delay Logic Times
<C+0+D=0> (seconds)

Omit Alarm <C/5+F+0>

Disable Alarm Reporting

Detector Assignments <C+0+E=126>

<C+0+D=0>

Row	Time	Plan	Offset	Day of Week
0	00:00	E	A	1234567
1	14:30	8	A	23456
2	16:30	E	A	23456
3	10:30	9	A	1 7
4	16:00	E	A	1 7
5	00:00	0	0	
6	00:00	0	0	
7	00:00	0	0	
8	00:00	0	0	
9	00:00	0	0	
A	00:00	0	0	
B	00:00	0	0	
C	00:00	0	0	
D	00:00	0	0	
E	00:00	0	0	
F	00:00	0	0	

TOD Coordination <C+0+9=0.1>
(Bank 1)

Time	Funct.	Day of Week
00:00	0	
00:00	0	
00:00	0	
00:00	0	
00:00	0	
00:00	0	
00:00	0	
00:00	0	
00:00	0	
00:00	0	
00:00	0	
00:00	0	
00:00	0	
00:00	0	
00:00	0	
00:00	0	
00:00	0	

TOD Function <C+0+7=0.1>

Column 4
Phases/Bits

<C+0+E=27>

Day	Year	Month	Holiday Type
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	

Holiday Dates <C+0+8=1.1>
(Bank 1)

Time	Plan	Offset	Holiday Type
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	

Holiday Events <C+0+9=1.1>
(Bank 1)

- T.O.D. Functions
- 0 =
 - 1 = Red Lock
 - 2 = Yellow Lock
 - 3 = Veh Min Recall
 - 4 = Ped Recall
 - 5 =
 - 6 = Rest In Walk
 - 7 = Red Rest
 - 8 = Double Entry
 - 9 = Veh Max Recall
 - A = Veh Soft Recall
 - B = Maximum 2
 - C = Conditional Service
 - D = Free Lag Phases
 - E = Bit 1 - Local Override
 - Bit 4 - Disable Detector Monitor
 - Bit 5 - Disable Low Priority Preempt
 - Bit 7 - Detector Count Monitor
 - Bit 8 - Real Time Split Monitor
 - F = Output Bits 1 thru 8

Row	Time	Plan	Offset	Day of Week
0	00:00	0	0	
1	00:00	0	0	
2	00:00	0	0	
3	00:00	0	0	
4	00:00	0	0	
5	00:00	0	0	
6	00:00	0	0	
7	00:00	0	0	
8	00:00	0	0	
9	00:00	0	0	
A	00:00	0	0	
B	00:00	0	0	
C	00:00	0	0	
D	00:00	0	0	
E	00:00	0	0	
F	00:00	0	0	

TOD Coordination <C+0+9=0.2>
(Bank 2)

Time	Funct.	Holiday Type
00:00	0	
00:00	0	
00:00	0	
00:00	0	
00:00	0	
00:00	0	
00:00	0	
00:00	0	
00:00	0	
00:00	0	
00:00	0	
00:00	0	
00:00	0	
00:00	0	
00:00	0	
00:00	0	
00:00	0	

Holiday TOD Function <C+0+7=0.2>

Column 4
Phases/Bits

<C+0+E=28>

Day	Year	Month	Holiday Type
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	

Holiday Dates <C+0+8=1.2>
(Bank 2)

Time	Plan	Offset	Holiday Type
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	

Holiday Events <C+0+9=1.2>
(Bank 2)

- Plan Select
- 1 thru 9 = Coordination Plan 1 thru 9
 - 14 or E = Free
 - 15 or F = Flash
- Offset Select
- A = Offset A
 - B = Offset B
 - C = Offset C
- Month Select
- 1 = January
 - 2 = February
 - 3 = March
 - 4 = April
 - 5 = May
 - 6 = June
 - 7 = July
 - 8 = August
 - 9 = September
 - A = October
 - B = November
 - C = December

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Special Event Schedule -- Table 1 <C+0+E=27>

Notes:

0 <E/27+5+F>
Limited Service Interval

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Special Event Schedule -- Table 2 <C+0+E=28>

Notes:

0 <E/28+5+F>
Limited Service Interval

Min Time (seconds) <F/1+0+8>
Min Green Before PE Force Off

Max Time (minutes) <F/1+0+9>
Max Preempt Time Before Failure

Min Time (seconds) <F/1+0+A>
Min Time Between Same Preempts
 (Does Not Apply To Railroad Preempt)

Low Pri. Channel <E/125+C+8>
Disable Low Priority Channel

- Low Priority
 1 = Channel A
 2 = Channel B
 3 = Channel C
 4 = Channel D

Delay Time (seconds) <F/1+A+D>
Bus Delay

Max Time (seconds) <F/1+A+E>
Max Early Green

Max Time (seconds) <F/1+A+F>
Max Green Extension

Row	Time	Headway	Direction	Day of Week
0	00 : 00	0	0	_____
1	00 : 00	0	0	_____
2	00 : 00	0	0	_____
3	00 : 00	0	0	_____
4	00 : 00	0	0	_____
5	00 : 00	0	0	_____
6	00 : 00	0	0	_____
7	00 : 00	0	0	_____
8	00 : 00	0	0	_____
9	00 : 00	0	0	_____
A	00 : 00	0	0	_____
B	00 : 00	0	0	_____
C	00 : 00	0	0	_____
D	00 : 00	0	0	_____
E	00 : 00	0	0	_____
F	00 : 00	0	0	_____

Headway <C+0+9=2.1>

- Headway Time
 (minutes)
 1 thru 9 = 1 thru 9
 A = 10
 B = 11
 C = 12
 D = 13
 E = 14
 F = 15

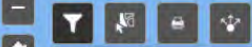
Low Priority Preemption (Bus Priority)

Only available with *Program 233RV2.B* (and above)

Note: Also see "Time of Day Functions", Function E, Bit 5 (Disable Low Priority)

APPENDIX B
SANDAG SCREENING MAP

Find address or place



Filter

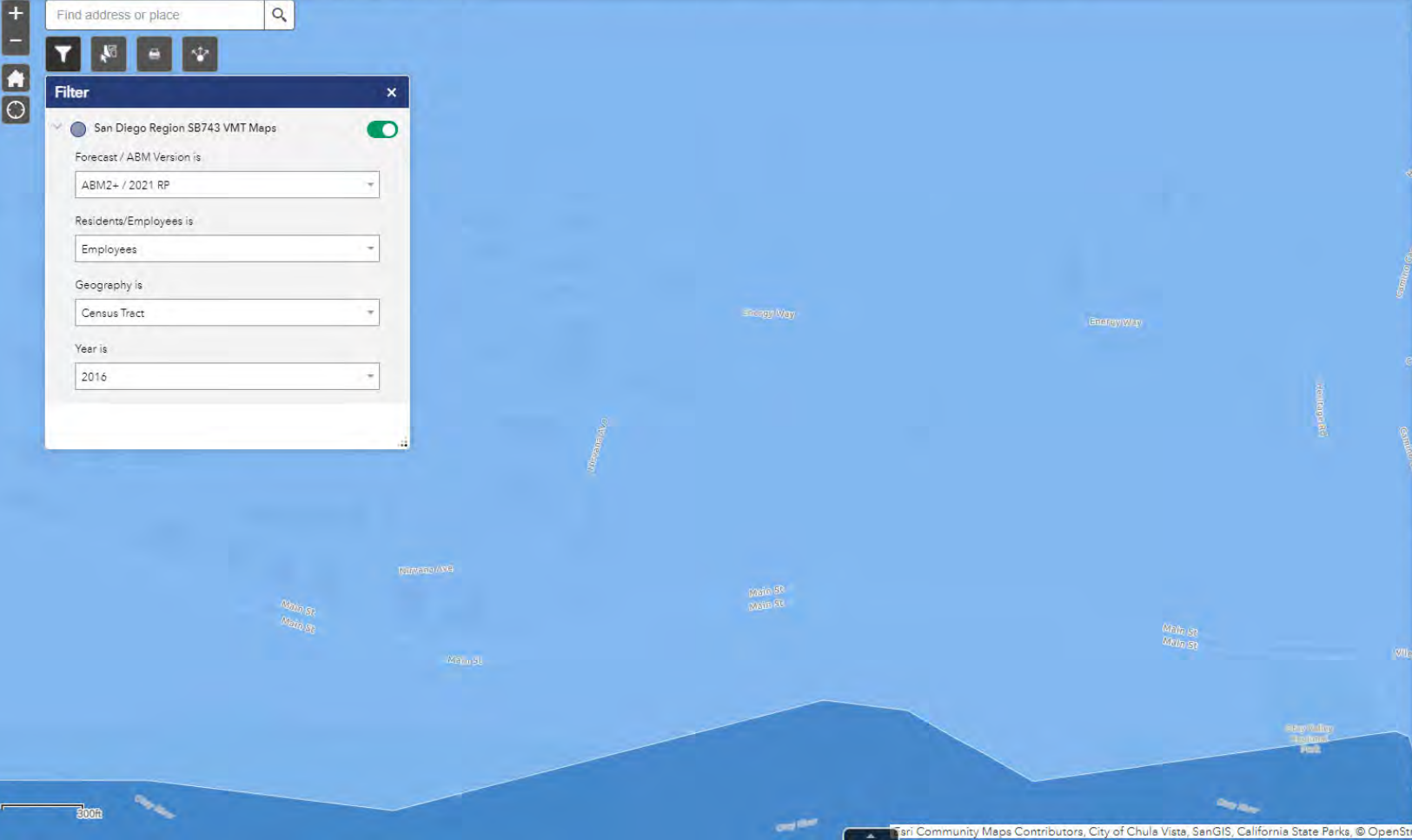
San Diego Region SB743 VMT Maps

Forecast / ABM Version is

Residents/Employees is

Geography is

Year is



Map Legend / Disclaimer

- Map Legend**
- Percent of Mean**
- More than 125% of Regional Mean
 - 100% to 125% of Regional Mean
 - 85% to 100% of Regional Mean
 - 50% to 85% of Regional Mean
 - Less than 50% of Regional Mean
 - No Data
 - Not Enough Data

Current Data
 2016 - ABM2+ / 2021 RP (Scenario ID 458)
 Regional Mean = 18.9 VMT per Resident
 Regional Mean = 18.9 VMT per Employee

Archived Data
 2016 - ABM2 / 2019 RTP (Scenario ID 434)
 Regional Mean = 19.0 VMT per Resident
 Regional Mean = 27.2 VMT per Employee

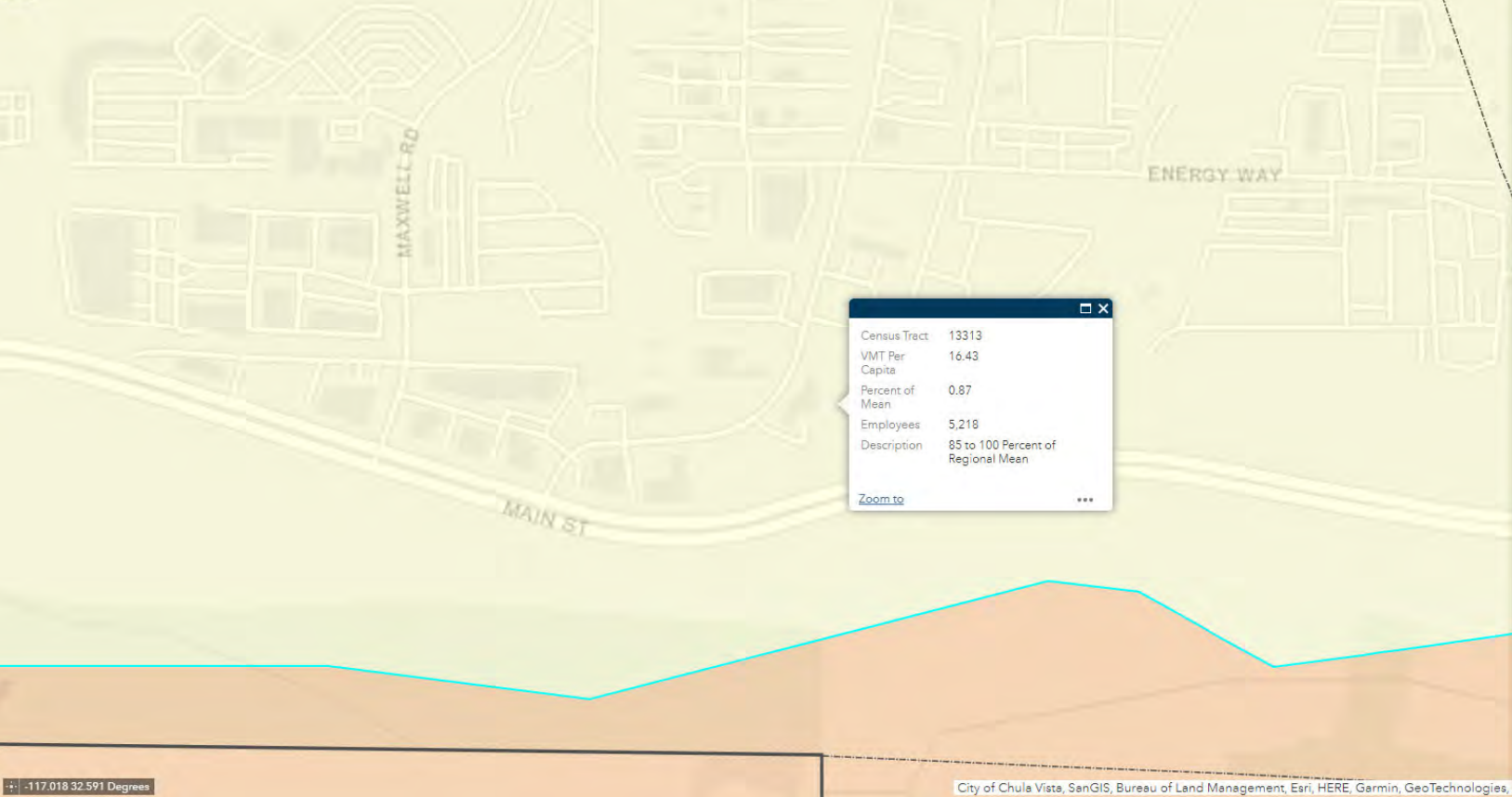
Disclaimer
 The maps provided by SANDAG are an interpretation of the Senate Bill 743 Technical Advisory guidelines published by the California Office of Planning and Research and are provided as a resource to the jurisdictions in the San Diego region to use as they see fit. Users of the data should exercise their professional judgment in reviewing, evaluating and analyzing VMT reduction estimate results from the tool. Each agency should consult with CEQA experts and legal counsel regarding their own CEQA practices and updates to local policies. Refer to full disclaimer and additional information relating to the use of the SB 743 VMT Map Web Application.

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Find address or place



Census Tract	13313
VMT Per Capita	16.43
Percent of Mean	0.87
Employees	5,218
Description	85 to 100 Percent of Regional Mean
Zoom to ...	

Legend

- City Boundary
- Trolley Station
- Rapid Station
- Bus Stop
- Trolley Line
- Rapid (225) Route
- Bus Route
 - Major
 - Other
- Combined TPA/HQTC
- Major Projects
- Transit Priority Area
- High-Quality Transit Corridors

APPENDIX C

INTERSECTION METHODOLOGY AND CITY OF CHULA VISTA TRANSPORTATION STUDY GUIDELINES SYNCHRO PARAMETER SPECIFICATIONS

SIGNALIZED INTERSECTIONS

For signalized intersections, level of service criteria are stated in terms of the average control delay per vehicle for a 15-minute analysis period. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. **Table 1** summarizes the delay thresholds for signalized intersections.

Level of service A describes operations with very low delay, (i.e. less than 10.0 seconds per vehicle). This occurs when progression is extremely favorable, and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.

Level of service B describes operations with delay in the range 10.1 seconds and 20.0 seconds per vehicle. This generally occurs with good progression and/or short cycle lengths. More vehicles stop than for LOS A, causing higher levels of average delay.

TABLE 1

LEVEL OF SERVICE THRESHOLDS FOR SIGNALIZED INTERSECTIONS

AVERAGE CONTROL DELAY PER VEHICLE (SECONDS/VEHICLE)	LEVEL OF SERVICE
0.0 ≤ 10.0	A
10.1 to 20.0	B
21.1 to 35.0	C
35.1 to 55.0	D
55.1 to 80.0	E
≥ 80.0	F

Source: Highway Capacity Manual, 2000.

Level of service C describes operations with delay in the range 20.1 seconds and 35.0 seconds per vehicle. These higher delays may result from fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.

Level of service D describes operations with delay in the range 35.1 seconds and 55.0 seconds per vehicle. At level D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or higher v/c ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are more frequent.

Level of service E describes operations with delay in the range of 55.1 seconds to 80.0 seconds per vehicle. This is considered to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent occurrences.

Level of service F describes operations with delay in excess of over 80.0 seconds per vehicle. This is considered to be unacceptable to most drivers. This condition often occurs with over-saturation (i.e., when arrival flow rates exceed the capacity of the intersection). It may also occur at high v/c ratios below 1.00 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.

UNIGNALIZED INTERSECTIONS

For unsignalized intersections, level of service is determined by the computed or measured control delay and is defined for each minor movement. Level of service is not defined for the intersection as a whole. **Table 2** depicts the criteria, which are based on the average control delay for any particular minor movement.

TABLE 2

LEVEL OF SERVICE THRESHOLDS FOR UNSIGNALIZED INTERSECTIONS

AVERAGE CONTROL DELAY PER VEHICLE (SECONDS/VEHICLE)			LEVEL OF SERVICE	EXPECTED DELAY TO MINOR STREET TRAFFIC
0.0	≤	10.0	A	Little or no delay
10.1	to	15.0	B	Short traffic delays
15.1	to	25.0	C	Average traffic delays
25.1	to	35.0	D	Long traffic delays
35.1	to	50.0	E	Very long traffic delays
	≥	50.0	F	Severe congestion

Source: Highway Capacity Manual, 2000.

Level of Service F exists when there are insufficient gaps of suitable size to allow a side street demand to safely cross through a major street traffic stream. This level of service is generally evident from extremely long control delays experienced by side-street traffic and by queuing on the minor-street approaches. The method, however, is based on a constant critical gap size; that is, the critical gap remains constant no matter how long the side-street motorist waits. LOS F may also appear in the form of side-street vehicles selecting smaller-than-usual gaps. In such cases, safety may be a problem, and some disruption to the major traffic stream may result. It is important to note that LOS F may not always result in long queues but may result in adjustments to normal gap acceptance behavior, which are more difficult to observe in the field than queuing.



APPENDIX G

Summary of Desired Transit Stop Features & Local Mobility Analysis Specifications

Local Mobility Analysis Specification – General

Parameter	Guidance
Peak Hour Factor	<ul style="list-style-type: none"> • Use the measured PHF by intersection approach that is obtained during traffic data collection. • For new intersections or to analyze conditions beyond five years of commencing the LMA, refer to the HCM and maintain consistency across analysis periods, scenarios, and intersections.
Saturation Flow Rate	<ul style="list-style-type: none"> • Use 1,850 vehicles per hour per lane. • Other Saturation Flow Rates in accordance with the HCM or other justification may be used with approval of the City Traffic Engineer. The current typical saturation flow rate in the HCM is 1,900 vehicles per hour per lane.
Signal Timing	<ul style="list-style-type: none"> • Obtain signal timing plans from the appropriate agency and use the timing (by time of day if provided) for the analysis. • For new traffic signals, typically use a maximum cycle length of 120 seconds for intersections near freeway interchanges or at the intersection of two arterial roadways. • For all other conditions use a maximum of 90 seconds, unless directed otherwise by City staff. • For all conditions, ensure that the minimum pedestrian crossing times are utilized.
Conflicting Pedestrians and Pedestrian Calls	<ul style="list-style-type: none"> • Use pedestrian count data if available. • If not available, refer to the HCM for appropriate minimum values.
Heavy Truck Percentage	<ul style="list-style-type: none"> • If available, use observed values from field observations or traffic counts. • If unavailable, the minimum recommended value is 3%. Heavy truck percentages should be higher on truck routes.
Lane Utilization Factor	<ul style="list-style-type: none"> • If applicable, adjust the lane utilization factor based on field observations. • If unavailable, refer to the HCM.

APPENDIX D

EXISTING PEAK HOUR INTERSECTION ANALYSIS WORKSHEETS

HCM 6th Signalized Intersection Summary
 1: Brandywine Ave & Main St

Existing AM
 07/06/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑	↗	↖	↑↑↑		↖↗	↑		↖	↑	↗
Traffic Volume (veh/h)	258	745	62	11	669	80	14	8	7	91	16	433
Future Volume (veh/h)	258	745	62	11	669	80	14	8	7	91	16	433
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.97	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807
Adj Flow Rate, veh/h	307	887	74	12	735	88	21	12	11	125	22	483
Peak Hour Factor	0.84	0.84	0.84	0.91	0.91	0.91	0.66	0.66	0.66	0.73	0.73	0.73
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	299	2216	661	19	1277	152	57	244	224	122	613	506
Arrive On Green	0.17	0.45	0.45	0.02	0.57	0.57	0.02	0.29	0.29	0.07	0.34	0.34
Sat Flow, veh/h	1721	4932	1471	1721	4452	528	3338	854	783	1721	1807	1490
Grp Volume(v), veh/h	307	887	74	12	541	282	21	0	23	125	22	483
Grp Sat Flow(s),veh/h/ln	1721	1644	1471	1721	1644	1692	1669	0	1637	1721	1807	1490
Q Serve(g_s), s	19.1	13.3	3.2	0.8	11.5	11.7	0.7	0.0	1.1	7.8	0.9	34.9
Cycle Q Clear(g_c), s	19.1	13.3	3.2	0.8	11.5	11.7	0.7	0.0	1.1	7.8	0.9	34.9
Prop In Lane	1.00		1.00	1.00		0.31	1.00		0.48	1.00		1.00
Lane Grp Cap(c), veh/h	299	2216	661	19	943	486	57	0	468	122	613	506
V/C Ratio(X)	1.03	0.40	0.11	0.62	0.57	0.58	0.37	0.00	0.05	1.02	0.04	0.96
Avail Cap(c_a), veh/h	299	2216	661	63	943	486	121	0	551	122	670	553
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.98	0.98	0.98	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.4	20.3	17.6	53.5	19.2	19.2	53.5	0.0	28.5	51.1	24.3	35.5
Incr Delay (d2), s/veh	59.3	0.5	0.3	11.5	2.5	4.9	1.4	0.0	0.0	88.2	0.0	25.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.8	4.9	1.1	0.4	3.6	4.0	0.3	0.0	0.4	6.3	0.4	15.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	104.8	20.9	17.9	65.0	21.6	24.1	54.9	0.0	28.5	139.3	24.3	61.1
LnGrp LOS	F	C	B	E	C	C	D	A	C	F	C	E
Approach Vol, veh/h		1268			835			44				630
Approach Delay, s/veh		41.0			23.1			41.1				75.4
Approach LOS		D			C			D				E
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.4	55.8	6.1	42.6	23.3	38.0	12.0	36.7				
Change Period (Y+Rc), s	* 4.2	* 6.4	* 4.2	5.3	* 4.2	* 6.4	* 4.2	5.3				
Max Green Setting (Gmax), s	* 4	* 41	* 4	40.8	* 19	* 26	* 7.8	37.0				
Max Q Clear Time (g_c+I1), s	2.8	15.3	2.7	36.9	21.1	13.7	9.8	3.1				
Green Ext Time (p_c), s	0.0	12.9	0.0	0.5	0.0	6.8	0.0	0.0				

Intersection Summary												
HCM 6th Ctrl Delay				43.4								
HCM 6th LOS				D								

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary

2: Auto Park PI & Main St

Existing AM
07/06/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑	↗	↖	↑↑↑	↗	↖	↑	↗	↖	↗	
Traffic Volume (veh/h)	57	732	58	5	732	2	15	0	2	2	1	16
Future Volume (veh/h)	57	732	58	5	732	2	15	0	2	2	1	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.98		0.95	0.98		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807
Adj Flow Rate, veh/h	66	851	67	6	851	2	32	0	4	3	1	20
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.47	0.47	0.47	0.79	0.79	0.79
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	84	3541	1064	10	3332	1000	235	0	206	251	10	198
Arrive On Green	0.10	1.00	1.00	0.01	1.00	1.00	0.14	0.00	0.14	0.14	0.14	0.14
Sat Flow, veh/h	1721	4932	1482	1721	4932	1481	1317	0	1458	1336	70	1401
Grp Volume(v), veh/h	66	851	67	6	851	2	32	0	4	3	0	21
Grp Sat Flow(s),veh/h/ln	1721	1644	1482	1721	1644	1481	1317	0	1458	1336	0	1471
Q Serve(g_s), s	4.1	0.0	0.0	0.4	0.0	0.0	2.4	0.0	0.3	0.2	0.0	1.4
Cycle Q Clear(g_c), s	4.1	0.0	0.0	0.4	0.0	0.0	3.8	0.0	0.3	0.5	0.0	1.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.95
Lane Grp Cap(c), veh/h	84	3541	1064	10	3332	1000	235	0	206	251	0	208
V/C Ratio(X)	0.79	0.24	0.06	0.57	0.26	0.00	0.14	0.00	0.02	0.01	0.00	0.10
Avail Cap(c_a), veh/h	232	3541	1064	91	3332	1000	552	0	557	572	0	562
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.95	0.95	0.99	0.99	0.99	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	49.1	0.0	0.0	54.2	0.0	0.0	42.8	0.0	40.7	40.9	0.0	41.1
Incr Delay (d2), s/veh	5.8	0.2	0.1	16.8	0.2	0.0	0.3	0.0	0.0	0.0	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.1	0.0	0.2	0.1	0.0	0.8	0.0	0.1	0.1	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.9	0.2	0.1	71.0	0.2	0.0	43.0	0.0	40.7	40.9	0.0	41.3
LnGrp LOS	D	A	A	E	A	A	D	A	D	D	A	D
Approach Vol, veh/h		984			859			36				24
Approach Delay, s/veh		3.8			0.7			42.8				41.3
Approach LOS		A			A			D				D
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.9	85.0		20.2	9.5	80.3		20.2				
Change Period (Y+Rc), s	4.2	* 6		4.6	* 4.2	* 6		4.6				
Max Green Setting (Gmax), s	5.8	* 47		42.0	* 15	* 38		42.0				
Max Q Clear Time (g_c+1), s	12.4	2.0		3.4	6.1	2.0		5.8				
Green Ext Time (p_c), s	0.0	13.5		0.1	0.0	11.9		0.1				

Intersection Summary

HCM 6th Ctrl Delay	3.6
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
3: Main St & Auto Park Ave

Existing AM
07/06/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑	↖				↖		↖
Traffic Volume (veh/h)	14	722	0	0	737	2	0	0	0	1	0	2
Future Volume (veh/h)	14	722	0	0	737	2	0	0	0	1	0	2
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1807	1807	0	1807	1807	1807				1807	0	1807
Adj Flow Rate, veh/h	16	830	0	0	857	2				3	0	5
Peak Hour Factor	0.87	0.87	0.87	0.86	0.86	0.86				0.38	0.38	0.38
Percent Heavy Veh, %	3	3	0	3	3	3				3	0	3
Cap, veh/h	24	4389	0	65	4131	1244				24	0	21
Arrive On Green	0.03	1.00	0.00	0.00	0.84	0.84				0.01	0.00	0.01
Sat Flow, veh/h	1721	5095	0	638	4932	1485				1721	0	1531
Grp Volume(v), veh/h	16	830	0	0	857	2				3	0	5
Grp Sat Flow(s),veh/h/ln	1721	1644	0	638	1644	1485				1721	0	1531
Q Serve(g_s), s	1.0	0.0	0.0	0.0	3.8	0.0				0.2	0.0	0.4
Cycle Q Clear(g_c), s	1.0	0.0	0.0	0.0	3.8	0.0				0.2	0.0	0.4
Prop In Lane	1.00		0.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	24	4389	0	65	4131	1244				24	0	21
V/C Ratio(X)	0.66	0.19	0.00	0.00	0.21	0.00				0.13	0.00	0.24
Avail Cap(c_a), veh/h	138	4389	0	65	4131	1244				579	0	515
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.98	0.98	0.00	0.00	1.00	1.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	53.2	0.0	0.0	0.0	1.8	1.5				53.6	0.0	53.7
Incr Delay (d2), s/veh	10.7	0.1	0.0	0.0	0.1	0.0				2.4	0.0	5.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.0	0.0	0.4	0.0				0.1	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.9	0.1	0.0	0.0	1.9	1.5				55.9	0.0	59.3
LnGrp LOS	E	A	A	A	A	A				E	A	E
Approach Vol, veh/h		846			859							8
Approach Delay, s/veh		1.3			1.9						58.0	
Approach LOS		A			A						E	
Timer - Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		103.9		6.1	5.7	98.1						
Change Period (Y+Rc), s		* 6		4.6	* 4.2	* 6						
Max Green Setting (Gmax), s		* 62		37.0	* 8.8	* 49						
Max Q Clear Time (g_c+I1), s		2.0		2.4	3.0	5.8						
Green Ext Time (p_c), s		14.8		0.0	0.0	12.7						

Intersection Summary

HCM 6th Ctrl Delay	1.9
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary

4: Main St & Maxwell Rd

Existing AM
07/06/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↕↔		↔↕↕↕				↕↔		↔↕	↕	↔
Traffic Volume (veh/h)	200	522	1	1	590	20	9	0	4	26	0	136
Future Volume (veh/h)	200	522	1	1	590	20	9	0	4	26	0	136
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	0.99		0.96	0.99		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807
Adj Flow Rate, veh/h	241	629	1	1	702	24	20	0	9	32	0	168
Peak Hour Factor	0.83	0.83	0.83	0.84	0.84	0.84	0.46	0.46	0.46	0.81	0.81	0.81
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	306	2344	4	2	2820	96	129	10	38	311	0	280
Arrive On Green	0.09	0.67	0.67	0.00	0.19	0.19	0.19	0.00	0.19	0.19	0.00	0.19
Sat Flow, veh/h	3338	3516	6	1721	4894	167	388	50	197	1343	0	1472
Grp Volume(v), veh/h	241	307	323	1	471	255	29	0	0	32	0	168
Grp Sat Flow(s),veh/h/ln	1669	1716	1805	1721	1644	1772	636	0	0	1343	0	1472
Q Serve(g_s), s	7.8	8.0	8.0	0.1	13.4	13.5	1.1	0.0	0.0	0.0	0.0	11.5
Cycle Q Clear(g_c), s	7.8	8.0	8.0	0.1	13.4	13.5	12.6	0.0	0.0	2.3	0.0	11.5
Prop In Lane	1.00		0.00	1.00		0.09	0.69		0.31	1.00		1.00
Lane Grp Cap(c), veh/h	306	1144	1204	2	1895	1021	176	0	0	311	0	280
V/C Ratio(X)	0.79	0.27	0.27	0.53	0.25	0.25	0.16	0.00	0.00	0.10	0.00	0.60
Avail Cap(c_a), veh/h	571	1144	1204	106	1895	1021	391	0	0	545	0	537
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.98	0.98	0.98	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	48.9	7.4	7.4	55.0	24.3	24.3	40.9	0.0	0.0	37.0	0.0	40.7
Incr Delay (d2), s/veh	1.7	0.6	0.5	65.1	0.3	0.6	0.4	0.0	0.0	0.1	0.0	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	2.9	3.1	0.1	5.8	6.3	0.8	0.0	0.0	0.7	0.0	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.6	8.0	8.0	120.0	24.6	24.9	41.4	0.0	0.0	37.1	0.0	42.7
LnGrp LOS	D	A	A	F	C	C	D	A	A	D	A	D
Approach Vol, veh/h		871			727			29			200	
Approach Delay, s/veh		19.8			24.8			41.4			41.8	
Approach LOS		B			C			D			D	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.3	79.6		26.0	14.3	69.7		26.0				
Change Period (Y+Rc), s	4.2	* 6.3		* 5.1	* 4.2	* 6.3		5.1				
Max Green Setting (Gmax), s	8	* 48		* 40	* 19	* 36		39.9				
Max Q Clear Time (g_c+1), s	10.0			13.5	9.8	15.5		14.6				
Green Ext Time (p_c), s	0.0	10.0		1.2	0.3	12.1		0.1				

Intersection Summary

HCM 6th Ctrl Delay	24.6
HCM 6th LOS	C

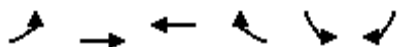
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary

5: Main St & Nirvana Ave

Existing AM
07/06/2022



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖ ↗	↑ ↑	↑ ↑ ↖ ↗		↖ ↗	↖ ↗
Traffic Volume (veh/h)	138	415	565	17	9	46
Future Volume (veh/h)	138	415	565	17	9	46
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.97	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1807	1807	1807	1807	1807	1807
Adj Flow Rate, veh/h	164	494	673	20	0	69
Peak Hour Factor	0.84	0.84	0.84	0.84	0.81	0.81
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	301	2971	3624	107	61	385
Arrive On Green	0.18	1.00	0.74	0.74	0.00	0.04
Sat Flow, veh/h	3338	3523	5080	146	1721	3062
Grp Volume(v), veh/h	164	494	449	244	0	69
Grp Sat Flow(s),veh/h/ln	1669	1716	1644	1775	1721	1531
Q Serve(g_s), s	4.9	0.0	4.6	4.6	0.0	2.2
Cycle Q Clear(g_c), s	4.9	0.0	4.6	4.6	0.0	2.2
Prop In Lane	1.00			0.08	1.00	1.00
Lane Grp Cap(c), veh/h	301	2971	2423	1308	61	385
V/C Ratio(X)	0.54	0.17	0.19	0.19	0.00	0.18
Avail Cap(c_a), veh/h	510	2971	2423	1308	626	1390
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.98	0.98	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	43.0	0.0	4.4	4.4	0.0	43.0
Incr Delay (d2), s/veh	0.6	0.1	0.2	0.3	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9	0.0	1.2	1.3	0.0	2.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	43.6	0.1	4.6	4.7	0.0	43.2
LnGrp LOS	D	A	A	A	A	D
Approach Vol, veh/h		658	693		69	
Approach Delay, s/veh		10.9	4.6		43.2	
Approach LOS		B	A		D	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		101.9		8.1	14.1	87.8
Change Period (Y+Rc), s		* 6.7		* 4.2	* 4.2	* 6.7
Max Green Setting (Gmax), s		* 59		* 40	* 17	* 38
Max Q Clear Time (g_c+I1), s		2.0		4.2	6.9	6.6
Green Ext Time (p_c), s		7.6		0.2	0.2	9.6

Intersection Summary

HCM 6th Ctrl Delay	9.4
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
 1: Brandywine Ave & Main St

Existing PM
 07/06/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑	↗	↖	↑↑↑		↖↗	↑		↖	↑	↗
Traffic Volume (veh/h)	334	783	75	16	955	65	92	19	19	82	6	480
Future Volume (veh/h)	334	783	75	16	955	65	92	19	19	82	6	480
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.97	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807
Adj Flow Rate, veh/h	352	824	79	19	1124	76	121	25	25	99	7	421
Peak Hour Factor	0.95	0.95	0.95	0.85	0.85	0.85	0.76	0.76	0.76	0.83	0.83	0.83
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	310	2219	662	28	1346	91	175	243	243	91	540	444
Arrive On Green	0.18	0.45	0.45	0.03	0.57	0.57	0.05	0.30	0.30	0.05	0.30	0.30
Sat Flow, veh/h	1721	4932	1471	1721	4708	318	3338	816	816	1721	1807	1486
Grp Volume(v), veh/h	352	824	79	19	785	415	121	0	50	99	7	421
Grp Sat Flow(s),veh/h/ln	1721	1644	1471	1721	1644	1738	1669	0	1631	1721	1807	1486
Q Serve(g_s), s	19.8	12.1	3.4	1.2	21.5	21.5	3.9	0.0	2.4	5.8	0.3	30.5
Cycle Q Clear(g_c), s	19.8	12.1	3.4	1.2	21.5	21.5	3.9	0.0	2.4	5.8	0.3	30.5
Prop In Lane	1.00		1.00	1.00		0.18	1.00		0.50	1.00		1.00
Lane Grp Cap(c), veh/h	310	2219	662	28	940	497	175	0	487	91	540	444
V/C Ratio(X)	1.14	0.37	0.12	0.69	0.83	0.84	0.69	0.00	0.10	1.09	0.01	0.95
Avail Cap(c_a), veh/h	310	2219	662	88	940	497	194	0	549	91	598	492
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.94	0.94	0.94	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.1	20.0	17.6	53.0	21.4	21.4	51.2	0.0	27.9	52.1	27.2	37.7
Incr Delay (d2), s/veh	93.3	0.5	0.4	10.2	8.2	14.5	6.7	0.0	0.0	121.3	0.0	25.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.1	4.5	1.2	0.6	6.0	7.2	1.8	0.0	1.0	5.5	0.1	14.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	138.4	20.5	18.0	63.2	29.6	35.9	57.9	0.0	27.9	173.4	27.2	63.6
LnGrp LOS	F	C	B	E	C	D	E	A	C	F	C	E
Approach Vol, veh/h		1255			1219			171				527
Approach Delay, s/veh		53.4			32.3			49.1				83.7
Approach LOS		D			C			D				F
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.0	55.9	10.0	38.2	24.0	37.9	10.0	38.1				
Change Period (Y+Rc), s	* 4.2	* 6.4	* 4.2	5.3	* 4.2	* 6.4	* 4.2	5.3				
Max Green Setting (Gmax), s	* 5.6	* 42	* 6.4	36.4	* 20	* 27	* 5.8	37.0				
Max Q Clear Time (g_c+I1), s	3.2	14.1	5.9	32.5	21.8	23.5	7.8	4.4				
Green Ext Time (p_c), s	0.0	12.5	0.0	0.4	0.0	3.1	0.0	0.2				

Intersection Summary

HCM 6th Ctrl Delay	50.1
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary

2: Auto Park PI & Main St

Existing PM
07/06/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑	↗	↖	↑↑↑	↗	↖	↗		↖	↗	
Traffic Volume (veh/h)	82	748	40	10	941	9	45	1	15	8	1	76
Future Volume (veh/h)	82	748	40	10	941	9	45	1	15	8	1	76
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.99		0.96	0.99		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807
Adj Flow Rate, veh/h	96	880	47	12	1134	11	70	2	23	10	1	93
Peak Hour Factor	0.85	0.85	0.85	0.83	0.83	0.83	0.64	0.64	0.64	0.82	0.82	0.82
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	119	3250	976	19	2966	889	240	23	269	305	3	285
Arrive On Green	0.14	1.00	1.00	0.00	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	1721	4932	1481	1721	4932	1479	1243	120	1375	1320	16	1460
Grp Volume(v), veh/h	96	880	47	12	1134	11	70	0	25	10	0	94
Grp Sat Flow(s),veh/h/ln	1721	1644	1481	1721	1644	1479	1243	0	1495	1320	0	1476
Q Serve(g_s), s	6.0	0.0	0.0	0.8	21.9	0.7	5.6	0.0	1.5	0.7	0.0	6.0
Cycle Q Clear(g_c), s	6.0	0.0	0.0	0.8	21.9	0.7	11.7	0.0	1.5	2.2	0.0	6.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.92	1.00		0.99
Lane Grp Cap(c), veh/h	119	3250	976	19	2966	889	240	0	292	305	0	288
V/C Ratio(X)	0.81	0.27	0.05	0.62	0.38	0.01	0.29	0.00	0.09	0.03	0.00	0.33
Avail Cap(c_a), veh/h	232	3250	976	75	2966	889	477	0	576	556	0	569
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.94	0.94	0.94	0.97	0.97	0.97	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.7	0.0	0.0	54.6	26.4	17.8	43.0	0.0	36.2	37.1	0.0	38.0
Incr Delay (d2), s/veh	4.6	0.2	0.1	11.4	0.4	0.0	0.7	0.0	0.1	0.0	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.1	0.0	0.4	9.6	0.2	1.8	0.0	0.6	0.2	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.3	0.2	0.1	65.9	26.7	17.9	43.7	0.0	36.3	37.2	0.0	38.7
LnGrp LOS	D	A	A	E	C	B	D	A	D	D	A	D
Approach Vol, veh/h		1023			1157			95			104	
Approach Delay, s/veh		5.0			27.1			41.8			38.5	
Approach LOS		A			C			D			D	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.4	78.5		26.1	11.8	72.1		26.1				
Change Period (Y+Rc), s	4.2	* 6		4.6	* 4.2	* 6		4.6				
Max Green Setting (Gmax), s	4.8	* 48		42.4	* 15	* 38		42.4				
Max Q Clear Time (g_c+1), s	12.8	2.0		8.0	8.0	23.9		13.7				
Green Ext Time (p_c), s	0.0	13.9		0.6	0.0	9.3		0.4				

Intersection Summary

HCM 6th Ctrl Delay	18.7
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
 3: Main St & Auto Park Ave

Existing PM
 07/06/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑	↖				↖		↖
Traffic Volume (veh/h)	6	779	0	0	947	3	0	0	0	2	0	7
Future Volume (veh/h)	6	779	0	0	947	3	0	0	0	2	0	7
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1807	1807	0	1807	1807	1807				1807	0	1807
Adj Flow Rate, veh/h	7	939	0	0	1141	4				3	0	9
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83				0.75	0.75	0.75
Percent Heavy Veh, %	3	3	0	3	3	3				3	0	3
Cap, veh/h	12	4361	0	65	4138	1246				34	0	30
Arrive On Green	0.01	1.00	0.00	0.00	0.84	0.84				0.02	0.00	0.02
Sat Flow, veh/h	1721	5095	0	576	4932	1485				1721	0	1531
Grp Volume(v), veh/h	7	939	0	0	1141	4				3	0	9
Grp Sat Flow(s),veh/h/ln	1721	1644	0	576	1644	1485				1721	0	1531
Q Serve(g_s), s	0.4	0.0	0.0	0.0	5.3	0.0				0.2	0.0	0.6
Cycle Q Clear(g_c), s	0.4	0.0	0.0	0.0	5.3	0.0				0.2	0.0	0.6
Prop In Lane	1.00		0.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	12	4361	0	65	4138	1246				34	0	30
V/C Ratio(X)	0.58	0.22	0.00	0.00	0.28	0.00				0.09	0.00	0.30
Avail Cap(c_a), veh/h	106	4361	0	65	4138	1246				579	0	515
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.98	0.98	0.00	0.00	1.00	1.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	54.1	0.0	0.0	0.0	1.9	1.4				53.0	0.0	53.2
Incr Delay (d2), s/veh	15.1	0.1	0.0	0.0	0.2	0.0				1.1	0.0	5.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	0.0	0.6	0.0				0.1	0.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.2	0.1	0.0	0.0	2.0	1.4				54.1	0.0	58.7
LnGrp LOS	E	A	A	A	A	A				D	A	E
Approach Vol, veh/h		946			1145							12
Approach Delay, s/veh		0.6			2.0							57.5
Approach LOS		A			A							E
Timer - Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		103.3		6.7	5.0	98.3						
Change Period (Y+Rc), s		* 6		4.6	* 4.2	* 6						
Max Green Setting (Gmax), s		* 62		37.0	* 6.8	* 51						
Max Q Clear Time (g_c+I1), s		2.0		2.6	2.4	7.3						
Green Ext Time (p_c), s		17.6		0.0	0.0	18.5						

Intersection Summary

HCM 6th Ctrl Delay	1.7
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
4: Main St & Maxwell Rd

Existing PM
07/06/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↔		↔↔↔	↔↔↔			↔		↔	↔	
Traffic Volume (veh/h)	135	653	8	0	731	35	7	0	0	44	0	227
Future Volume (veh/h)	135	653	8	0	731	35	7	0	0	44	0	227
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.98	1.00		1.00	0.99		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807
Adj Flow Rate, veh/h	157	759	9	0	786	38	12	0	0	85	0	437
Peak Hour Factor	0.86	0.86	0.86	0.93	0.93	0.93	0.58	0.58	0.58	0.52	0.52	0.52
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	301	1984	24	2	2132	103	106	0	0	611	0	484
Arrive On Green	0.09	0.57	0.57	0.00	0.15	0.15	0.33	0.00	0.00	0.33	0.00	0.33
Sat Flow, veh/h	3338	3473	41	1721	4815	232	126	0	0	1362	0	1489
Grp Volume(v), veh/h	157	375	393	0	536	288	12	0	0	85	0	437
Grp Sat Flow(s),veh/h/ln	1669	1716	1798	1721	1644	1758	126	0	0	1362	0	1489
Q Serve(g_s), s	4.9	13.2	13.2	0.0	16.2	16.3	1.4	0.0	0.0	0.0	0.0	30.9
Cycle Q Clear(g_c), s	4.9	13.2	13.2	0.0	16.2	16.3	32.2	0.0	0.0	3.9	0.0	30.9
Prop In Lane	1.00		0.02	1.00		0.13	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	301	980	1027	2	1456	779	106	0	0	611	0	484
V/C Ratio(X)	0.52	0.38	0.38	0.00	0.37	0.37	0.11	0.00	0.00	0.14	0.00	0.90
Avail Cap(c_a), veh/h	358	980	1027	66	1456	779	199	0	0	751	0	637
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	0.98	0.98	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	47.8	12.9	12.9	0.0	33.1	33.1	50.9	0.0	0.0	26.4	0.0	35.5
Incr Delay (d2), s/veh	0.5	1.1	1.1	0.0	0.7	1.3	0.5	0.0	0.0	0.1	0.0	13.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	5.2	5.4	0.0	7.2	7.8	0.3	0.0	0.0	1.6	0.0	12.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.3	14.1	14.0	0.0	33.8	34.4	51.3	0.0	0.0	26.5	0.0	48.9
LnGrp LOS	D	B	B	A	C	C	D	A	A	C	A	D
Approach Vol, veh/h		925			824			12				522
Approach Delay, s/veh		19.9			34.0			51.3				45.2
Approach LOS		B			C			D				D
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	69.1		40.9	14.1	55.0		40.9				
Change Period (Y+Rc), s	4.2	* 6.3		* 5.1	* 4.2	* 6.3		5.1				
Max Green Setting (Gmax), s	4.2	* 43		* 47	* 12	* 36		46.9				
Max Q Clear Time (g_c+1), s	10.0	15.2		32.9	6.9	18.3		34.2				
Green Ext Time (p_c), s	0.0	11.3		2.9	0.1	12.0		0.0				

Intersection Summary

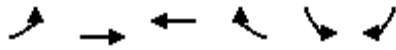
HCM 6th Ctrl Delay	30.9
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
5: Main St & Nirvana Ave

Existing PM
07/06/2022



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖ ↗	↑ ↑	↖ ↗		↖ ↗	↖ ↗
Traffic Volume (veh/h)	135	581	605	40	49	154
Future Volume (veh/h)	135	581	605	40	49	154
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.97	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1807	1807	1807	1807	1807	1807
Adj Flow Rate, veh/h	161	692	651	43	112	116
Peak Hour Factor	0.84	0.84	0.93	0.93	0.88	0.88
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	301	2778	3212	211	158	278
Arrive On Green	0.18	1.00	0.68	0.68	0.09	0.09
Sat Flow, veh/h	3338	3523	4880	309	1721	1531
Grp Volume(v), veh/h	161	692	452	242	112	116
Grp Sat Flow(s),veh/h/ln	1669	1716	1644	1739	1721	1531
Q Serve(g_s), s	4.8	0.0	5.6	5.7	7.0	7.4
Cycle Q Clear(g_c), s	4.8	0.0	5.6	5.7	7.0	7.4
Prop In Lane	1.00			0.18	1.00	1.00
Lane Grp Cap(c), veh/h	301	2778	2239	1184	158	278
V/C Ratio(X)	0.53	0.25	0.20	0.20	0.71	0.42
Avail Cap(c_a), veh/h	449	2778	2239	1184	701	762
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.95	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.0	0.0	6.5	6.5	48.5	39.8
Incr Delay (d2), s/veh	0.5	0.2	0.2	0.4	5.8	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9	0.1	1.6	1.8	3.2	6.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	43.5	0.2	6.7	6.9	54.3	40.8
LnGrp LOS	D	A	A	A	D	D
Approach Vol, veh/h		853	694		228	
Approach Delay, s/veh		8.4	6.8		47.5	
Approach LOS		A	A		D	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		95.7		14.3	14.1	81.6
Change Period (Y+Rc), s		* 6.7		* 4.2	* 4.2	* 6.7
Max Green Setting (Gmax), s		* 54		* 45	* 15	* 35
Max Q Clear Time (g_c+I1), s		2.0		9.4	6.8	7.7
Green Ext Time (p_c), s		11.5		0.7	0.2	8.1
Intersection Summary						
HCM 6th Ctrl Delay			12.8			
HCM 6th LOS			B			
Notes						
User approved volume balancing among the lanes for turning movement.						
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.						

APPENDIX E

EXISTING + PROJECT PEAK HOUR INTERSECTION ANALYSIS WORKSHEETS

HCM 6th Signalized Intersection Summary
 1: Brandywine Ave & Main St

Existing + Project AM
 01/12/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑	↗	↖	↑↑↑		↖↗	↑		↖	↑	↗
Traffic Volume (veh/h)	258	853	62	11	687	82	14	8	7	104	16	433
Future Volume (veh/h)	258	853	62	11	687	82	14	8	7	104	16	433
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.97	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807
Adj Flow Rate, veh/h	307	1015	74	12	755	90	21	12	11	142	22	483
Peak Hour Factor	0.84	0.84	0.84	0.91	0.91	0.91	0.66	0.66	0.66	0.73	0.73	0.73
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	299	2216	661	19	1278	151	57	244	224	122	613	506
Arrive On Green	0.17	0.45	0.45	0.02	0.57	0.57	0.02	0.29	0.29	0.07	0.34	0.34
Sat Flow, veh/h	1721	4932	1471	1721	4454	527	3338	854	783	1721	1807	1490
Grp Volume(v), veh/h	307	1015	74	12	556	289	21	0	23	142	22	483
Grp Sat Flow(s),veh/h/ln	1721	1644	1471	1721	1644	1693	1669	0	1637	1721	1807	1490
Q Serve(g_s), s	19.1	15.7	3.2	0.8	12.0	12.2	0.7	0.0	1.1	7.8	0.9	34.9
Cycle Q Clear(g_c), s	19.1	15.7	3.2	0.8	12.0	12.2	0.7	0.0	1.1	7.8	0.9	34.9
Prop In Lane	1.00		1.00	1.00		0.31	1.00		0.48	1.00		1.00
Lane Grp Cap(c), veh/h	299	2216	661	19	943	486	57	0	468	122	613	506
V/C Ratio(X)	1.03	0.46	0.11	0.62	0.59	0.60	0.37	0.00	0.05	1.16	0.04	0.96
Avail Cap(c_a), veh/h	299	2216	661	63	943	486	121	0	551	122	670	553
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.97	0.97	0.97	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.4	21.0	17.6	53.5	19.3	19.3	53.5	0.0	28.5	51.1	24.3	35.5
Incr Delay (d2), s/veh	59.3	0.7	0.3	11.4	2.6	5.2	1.4	0.0	0.0	132.2	0.0	25.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.8	5.8	1.1	0.4	3.7	4.2	0.3	0.0	0.4	7.8	0.4	15.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	104.8	21.7	17.9	64.9	21.9	24.5	54.9	0.0	28.5	183.3	24.3	61.1
LnGrp LOS	F	C	B	E	C	C	D	A	C	F	C	E
Approach Vol, veh/h		1396			857			44				647
Approach Delay, s/veh		39.8			23.4			41.1				86.7
Approach LOS		D			C			D				F
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.4	55.8	6.1	42.6	23.3	38.0	12.0	36.7				
Change Period (Y+Rc), s	* 4.2	* 6.4	* 4.2	5.3	* 4.2	* 6.4	* 4.2	5.3				
Max Green Setting (Gmax), s	* 4	* 41	* 4	40.8	* 19	* 26	* 7.8	37.0				
Max Q Clear Time (g_c+I1), s	2.8	17.7	2.7	36.9	21.1	14.2	9.8	3.1				
Green Ext Time (p_c), s	0.0	13.8	0.0	0.5	0.0	6.7	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	45.3
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
2: Auto Park PI & Main St

Existing + Project AM
01/12/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑	↗	↖	↑↑↑	↗	↖	↑	↗	↖	↗	↘
Traffic Volume (veh/h)	57	853	58	5	752	2	15	0	2	2	1	16
Future Volume (veh/h)	57	853	58	5	752	2	15	0	2	2	1	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.98		0.95	0.98		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807
Adj Flow Rate, veh/h	66	992	67	6	874	2	32	0	4	3	1	20
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.47	0.47	0.47	0.79	0.79	0.79
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	84	3541	1064	10	3331	1000	235	0	206	251	10	198
Arrive On Green	0.06	0.95	0.95	0.01	1.00	1.00	0.14	0.00	0.14	0.14	0.14	0.14
Sat Flow, veh/h	1721	4932	1482	1721	4932	1481	1317	0	1458	1336	70	1401
Grp Volume(v), veh/h	66	992	67	6	874	2	32	0	4	3	0	21
Grp Sat Flow(s),veh/h/ln	1721	1644	1482	1721	1644	1481	1317	0	1458	1336	0	1471
Q Serve(g_s), s	4.2	1.4	0.2	0.4	0.0	0.0	2.4	0.0	0.3	0.2	0.0	1.4
Cycle Q Clear(g_c), s	4.2	1.4	0.2	0.4	0.0	0.0	3.8	0.0	0.3	0.5	0.0	1.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.95
Lane Grp Cap(c), veh/h	84	3541	1064	10	3331	1000	235	0	206	251	0	208
V/C Ratio(X)	0.79	0.28	0.06	0.57	0.26	0.00	0.14	0.00	0.02	0.01	0.00	0.10
Avail Cap(c_a), veh/h	169	3541	1064	91	3331	1000	552	0	557	572	0	562
HCM Platoon Ratio	1.33	1.33	1.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.92	0.92	0.92	0.99	0.99	0.99	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	50.9	0.7	0.7	54.2	0.0	0.0	42.8	0.0	40.7	40.9	0.0	41.1
Incr Delay (d2), s/veh	5.6	0.2	0.1	16.8	0.2	0.0	0.3	0.0	0.0	0.0	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.3	0.1	0.2	0.1	0.0	0.8	0.0	0.1	0.1	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.4	0.9	0.8	71.0	0.2	0.0	43.0	0.0	40.7	40.9	0.0	41.3
LnGrp LOS	E	A	A	E	A	A	D	A	D	D	A	D
Approach Vol, veh/h		1125			882			36				24
Approach Delay, s/veh		4.2			0.7			42.8				41.3
Approach LOS		A			A			D				D
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.9	85.0		20.2	9.6	80.3		20.2				
Change Period (Y+Rc), s	4.2	* 6		4.6	* 4.2	* 6		4.6				
Max Green Setting (Gmax), s	5.8	* 47		42.0	* 11	* 42		42.0				
Max Q Clear Time (g_c+1), s	12.4	3.4		3.4	6.2	2.0		5.8				
Green Ext Time (p_c), s	0.0	16.2		0.1	0.0	12.7		0.1				

Intersection Summary

HCM 6th Ctrl Delay	3.8
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
 3: Main St & Auto Park Ave

Existing + Project AM
 01/12/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑	↖				↖		↖
Traffic Volume (veh/h)	14	843	0	0	757	2	0	0	0	1	0	2
Future Volume (veh/h)	14	843	0	0	757	2	0	0	0	1	0	2
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1807	1807	0	1807	1807	1807				1807	0	1807
Adj Flow Rate, veh/h	16	969	0	0	880	2				3	0	5
Peak Hour Factor	0.87	0.87	0.87	0.86	0.86	0.86				0.38	0.38	0.38
Percent Heavy Veh, %	3	3	0	3	3	3				3	0	3
Cap, veh/h	24	4389	0	65	4131	1244				24	0	21
Arrive On Green	0.01	0.89	0.00	0.00	0.84	0.84				0.01	0.00	0.01
Sat Flow, veh/h	1721	5095	0	560	4932	1485				1721	0	1531
Grp Volume(v), veh/h	16	969	0	0	880	2				3	0	5
Grp Sat Flow(s),veh/h/ln	1721	1644	0	560	1644	1485				1721	0	1531
Q Serve(g_s), s	1.0	3.0	0.0	0.0	3.9	0.0				0.2	0.0	0.4
Cycle Q Clear(g_c), s	1.0	3.0	0.0	0.0	3.9	0.0				0.2	0.0	0.4
Prop In Lane	1.00		0.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	24	4389	0	65	4131	1244				24	0	21
V/C Ratio(X)	0.66	0.22	0.00	0.00	0.21	0.00				0.13	0.00	0.24
Avail Cap(c_a), veh/h	341	4389	0	65	4131	1244				579	0	515
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.97	0.97	0.00	0.00	1.00	1.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	54.0	0.8	0.0	0.0	1.8	1.5				53.6	0.0	53.7
Incr Delay (d2), s/veh	10.6	0.1	0.0	0.0	0.1	0.0				2.4	0.0	5.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.2	0.0	0.0	0.5	0.0				0.1	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.5	0.9	0.0	0.0	1.9	1.5				55.9	0.0	59.3
LnGrp LOS	E	A	A	A	A	A				E	A	E
Approach Vol, veh/h		985			882							8
Approach Delay, s/veh		2.0			1.9						58.0	
Approach LOS		A			A						E	
Timer - Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		103.9		6.1	5.7	98.1						
Change Period (Y+Rc), s		* 6		4.6	* 4.2	* 6						
Max Green Setting (Gmax), s		* 62		37.0	* 22	* 36						
Max Q Clear Time (g_c+I1), s		5.0		2.4	3.0	5.9						
Green Ext Time (p_c), s		18.2		0.0	0.0	11.6						

Intersection Summary

HCM 6th Ctrl Delay	2.2
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
4: Main St & Maxwell Rd

Existing + Project AM
01/12/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↓		↔↔↔	↔↔↔			↔		↔	↓	
Traffic Volume (veh/h)	200	643	1	1	610	20	9	0	4	26	0	136
Future Volume (veh/h)	200	643	1	1	610	20	9	0	4	26	0	136
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	0.99		0.96	0.99		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807
Adj Flow Rate, veh/h	241	775	1	1	726	24	20	0	9	32	0	168
Peak Hour Factor	0.83	0.83	0.83	0.84	0.84	0.84	0.46	0.46	0.46	0.81	0.81	0.81
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	303	2345	3	2	2827	93	129	10	38	311	0	280
Arrive On Green	0.09	0.67	0.67	0.00	0.19	0.19	0.19	0.00	0.19	0.19	0.00	0.19
Sat Flow, veh/h	3338	3518	5	1721	4900	162	388	50	197	1343	0	1472
Grp Volume(v), veh/h	241	378	398	1	486	264	29	0	0	32	0	168
Grp Sat Flow(s),veh/h/ln	1669	1716	1806	1721	1644	1774	636	0	0	1343	0	1472
Q Serve(g_s), s	7.8	10.4	10.4	0.1	13.9	13.9	1.1	0.0	0.0	0.0	0.0	11.5
Cycle Q Clear(g_c), s	7.8	10.4	10.4	0.1	13.9	13.9	12.6	0.0	0.0	2.3	0.0	11.5
Prop In Lane	1.00		0.00	1.00		0.09	0.69		0.31	1.00		1.00
Lane Grp Cap(c), veh/h	303	1144	1204	2	1897	1023	176	0	0	311	0	280
V/C Ratio(X)	0.79	0.33	0.33	0.53	0.26	0.26	0.16	0.00	0.00	0.10	0.00	0.60
Avail Cap(c_a), veh/h	303	1144	1204	106	1897	1023	391	0	0	545	0	537
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.98	0.98	0.98	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	49.0	7.8	7.8	55.0	24.4	24.5	40.9	0.0	0.0	37.0	0.0	40.7
Incr Delay (d2), s/veh	12.6	0.8	0.7	65.1	0.3	0.6	0.4	0.0	0.0	0.1	0.0	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	3.8	4.0	0.1	6.0	6.6	0.8	0.0	0.0	0.7	0.0	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.6	8.6	8.6	120.0	24.8	25.1	41.4	0.0	0.0	37.1	0.0	42.7
LnGrp LOS	E	A	A	F	C	C	D	A	A	D	A	D
Approach Vol, veh/h		1017			751			29				200
Approach Delay, s/veh		21.1			25.0			41.4				41.8
Approach LOS		C			C			D				D
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.3	79.6		26.0	14.2	69.8		26.0				
Change Period (Y+Rc), s	4.2	* 6.3		* 5.1	* 4.2	* 6.3		5.1				
Max Green Setting (Gmax), s	8	* 48		* 40	* 10	* 45		39.9				
Max Q Clear Time (g_c+1), s	12.4			13.5	9.8	15.9		14.6				
Green Ext Time (p_c), s	0.0	12.7		1.2	0.0	15.8		0.1				

Intersection Summary

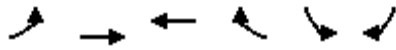
HCM 6th Ctrl Delay	25.0
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
5: Main St & Nirvana Ave

Existing + Project AM
01/12/2023



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖ ↗	↑ ↑	↑ ↑ ↖ ↗		↖ ↗	↖ ↗
Traffic Volume (veh/h)	259	415	565	30	11	66
Future Volume (veh/h)	259	415	565	30	11	66
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.97	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1807	1807	1807	1807	1807	1807
Adj Flow Rate, veh/h	308	494	673	36	0	96
Peak Hour Factor	0.84	0.84	0.84	0.84	0.81	0.81
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	365	2934	3384	180	79	476
Arrive On Green	0.22	1.00	0.71	0.71	0.00	0.05
Sat Flow, veh/h	3338	3523	4947	255	1721	3062
Grp Volume(v), veh/h	308	494	461	248	0	96
Grp Sat Flow(s),veh/h/ln	1669	1716	1644	1751	1721	1531
Q Serve(g_s), s	9.7	0.0	5.3	5.3	0.0	3.0
Cycle Q Clear(g_c), s	9.7	0.0	5.3	5.3	0.0	3.0
Prop In Lane	1.00			0.15	1.00	1.00
Lane Grp Cap(c), veh/h	365	2934	2326	1239	79	476
V/C Ratio(X)	0.84	0.17	0.20	0.20	0.00	0.20
Avail Cap(c_a), veh/h	510	2934	2326	1239	626	1448
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.96	0.96	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	42.1	0.0	5.5	5.5	0.0	40.5
Incr Delay (d2), s/veh	6.4	0.1	0.2	0.4	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.9	0.0	1.4	1.6	0.0	2.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	48.5	0.1	5.7	5.8	0.0	40.7
LnGrp LOS	D	A	A	A	A	D
Approach Vol, veh/h		802	709		96	
Approach Delay, s/veh		18.7	5.7		40.7	
Approach LOS		B	A		D	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		100.7		9.3	16.2	84.5
Change Period (Y+Rc), s		* 6.7		* 4.2	* 4.2	* 6.7
Max Green Setting (Gmax), s		* 59		* 40	* 17	* 38
Max Q Clear Time (g_c+I1), s		2.0		5.0	11.7	7.3
Green Ext Time (p_c), s		7.6		0.3	0.3	9.8

Intersection Summary

HCM 6th Ctrl Delay	14.3
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		T			T
Traffic Vol, veh/h	22	0	155	134	0	55
Future Vol, veh/h	22	0	155	134	0	55
Conflicting Peds, #/hr	10	10	0	10	10	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	24	0	170	147	0	60

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	324	264	0	0	327	0
Stage 1	254	-	-	-	-	-
Stage 2	70	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227	-
Pot Cap-1 Maneuver	668	772	-	-	1227	-
Stage 1	786	-	-	-	-	-
Stage 2	950	-	-	-	-	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	655	757	-	-	1215	-
Mov Cap-2 Maneuver	655	-	-	-	-	-
Stage 1	778	-	-	-	-	-
Stage 2	941	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.7	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	655	1215
HCM Lane V/C Ratio	-	-	0.037	-
HCM Control Delay (s)	-	-	10.7	0
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0

HCM 6th Signalized Intersection Summary
 1: Brandywine Ave & Main St

Existing + Project PM
 01/12/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑	↗	↖	↑↑↑		↖↗	↖		↖	↑	↗
Traffic Volume (veh/h)	334	818	75	16	1063	78	92	19	19	86	6	480
Future Volume (veh/h)	334	818	75	16	1063	78	92	19	19	86	6	480
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.97	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807
Adj Flow Rate, veh/h	352	861	79	19	1251	92	121	25	25	104	7	421
Peak Hour Factor	0.95	0.95	0.95	0.85	0.85	0.85	0.76	0.76	0.76	0.83	0.83	0.83
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	310	2219	662	28	1337	98	175	243	243	91	540	444
Arrive On Green	0.18	0.45	0.45	0.03	0.57	0.57	0.05	0.30	0.30	0.05	0.30	0.30
Sat Flow, veh/h	1721	4932	1471	1721	4677	344	3338	816	816	1721	1807	1486
Grp Volume(v), veh/h	352	861	79	19	880	463	121	0	50	104	7	421
Grp Sat Flow(s),veh/h/ln	1721	1644	1471	1721	1644	1732	1669	0	1631	1721	1807	1486
Q Serve(g_s), s	19.8	12.8	3.4	1.2	27.1	27.1	3.9	0.0	2.4	5.8	0.3	30.5
Cycle Q Clear(g_c), s	19.8	12.8	3.4	1.2	27.1	27.1	3.9	0.0	2.4	5.8	0.3	30.5
Prop In Lane	1.00		1.00	1.00		0.20	1.00		0.50	1.00		1.00
Lane Grp Cap(c), veh/h	310	2219	662	28	940	495	175	0	487	91	540	444
V/C Ratio(X)	1.14	0.39	0.12	0.69	0.94	0.94	0.69	0.00	0.10	1.15	0.01	0.95
Avail Cap(c_a), veh/h	310	2219	662	88	940	495	194	0	549	91	598	492
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.92	0.92	0.92	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.1	20.2	17.6	53.0	22.6	22.6	51.2	0.0	27.9	52.1	27.2	37.7
Incr Delay (d2), s/veh	93.3	0.5	0.4	10.0	16.3	25.7	6.7	0.0	0.0	139.3	0.0	25.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.1	4.7	1.2	0.6	7.8	9.5	1.8	0.0	1.0	6.0	0.1	14.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	138.4	20.7	18.0	63.0	38.9	48.3	57.9	0.0	27.9	191.4	27.2	63.6
LnGrp LOS	F	C	B	E	D	D	E	A	C	F	C	E
Approach Vol, veh/h		1292			1362			171				532
Approach Delay, s/veh		52.6			42.5			49.1				88.1
Approach LOS		D			D			D				F
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.0	55.9	10.0	38.2	24.0	37.9	10.0	38.1				
Change Period (Y+Rc), s	* 4.2	* 6.4	* 4.2	5.3	* 4.2	* 6.4	* 4.2	5.3				
Max Green Setting (Gmax), s	* 5.6	* 42	* 6.4	36.4	* 20	* 27	* 5.8	37.0				
Max Q Clear Time (g_c+I1), s	3.2	14.8	5.9	32.5	21.8	29.1	7.8	4.4				
Green Ext Time (p_c), s	0.0	12.8	0.0	0.4	0.0	0.0	0.0	0.2				

Intersection Summary

HCM 6th Ctrl Delay	53.9
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
2: Auto Park PI & Main St

Existing + Project PM
01/12/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑	↗	↖	↑↑↑	↗	↖	↑	↗	↖	↗	↘
Traffic Volume (veh/h)	82	787	40	10	1062	9	45	1	15	8	1	76
Future Volume (veh/h)	82	787	40	10	1062	9	45	1	15	8	1	76
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.99		0.96	0.99		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807
Adj Flow Rate, veh/h	96	926	47	12	1280	11	70	2	23	10	1	93
Peak Hour Factor	0.85	0.85	0.85	0.83	0.83	0.83	0.64	0.64	0.64	0.82	0.82	0.82
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	119	3250	976	19	2966	889	240	23	269	305	3	285
Arrive On Green	0.14	1.00	1.00	0.00	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	1721	4932	1481	1721	4932	1479	1243	120	1375	1320	16	1460
Grp Volume(v), veh/h	96	926	47	12	1280	11	70	0	25	10	0	94
Grp Sat Flow(s),veh/h/ln	1721	1644	1481	1721	1644	1479	1243	0	1495	1320	0	1476
Q Serve(g_s), s	6.0	0.0	0.0	0.8	25.0	0.7	5.6	0.0	1.5	0.7	0.0	6.0
Cycle Q Clear(g_c), s	6.0	0.0	0.0	0.8	25.0	0.7	11.7	0.0	1.5	2.2	0.0	6.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.92	1.00		0.99
Lane Grp Cap(c), veh/h	119	3250	976	19	2966	889	240	0	292	305	0	288
V/C Ratio(X)	0.81	0.28	0.05	0.62	0.43	0.01	0.29	0.00	0.09	0.03	0.00	0.33
Avail Cap(c_a), veh/h	232	3250	976	75	2966	889	477	0	576	556	0	569
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.93	0.93	0.93	0.96	0.96	0.96	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.7	0.0	0.0	54.6	27.6	17.8	43.0	0.0	36.2	37.1	0.0	38.0
Incr Delay (d2), s/veh	4.6	0.2	0.1	11.3	0.4	0.0	0.7	0.0	0.1	0.0	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.1	0.0	0.4	11.0	0.2	1.8	0.0	0.6	0.2	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.3	0.2	0.1	65.8	28.1	17.9	43.7	0.0	36.3	37.2	0.0	38.7
LnGrp LOS	D	A	A	E	C	B	D	A	D	D	A	D
Approach Vol, veh/h		1069			1303			95			104	
Approach Delay, s/veh		4.8			28.3			41.8			38.5	
Approach LOS		A			C			D			D	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.4	78.5		26.1	11.8	72.1		26.1				
Change Period (Y+Rc), s	4.2	* 6		4.6	* 4.2	* 6		4.6				
Max Green Setting (Gmax), s	4.8	* 48		42.4	* 15	* 38		42.4				
Max Q Clear Time (g_c+1), s	12.8	2.0		8.0	8.0	27.0		13.7				
Green Ext Time (p_c), s	0.0	14.8		0.6	0.0	8.3		0.4				

Intersection Summary

HCM 6th Ctrl Delay	19.4
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
 3: Main St & Auto Park Ave

Existing + Project PM
 01/12/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑	↖				↖		↖
Traffic Volume (veh/h)	6	818	0	0	1068	3	0	0	0	2	0	7
Future Volume (veh/h)	6	818	0	0	1068	3	0	0	0	2	0	7
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1807	1807	0	1807	1807	1807				1807	0	1807
Adj Flow Rate, veh/h	7	986	0	0	1287	4				3	0	9
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83				0.75	0.75	0.75
Percent Heavy Veh, %	3	3	0	3	3	3				3	0	3
Cap, veh/h	12	4361	0	65	4138	1246				34	0	30
Arrive On Green	0.01	1.00	0.00	0.00	0.84	0.84				0.02	0.00	0.02
Sat Flow, veh/h	1721	5095	0	551	4932	1485				1721	0	1531
Grp Volume(v), veh/h	7	986	0	0	1287	4				3	0	9
Grp Sat Flow(s),veh/h/ln	1721	1644	0	551	1644	1485				1721	0	1531
Q Serve(g_s), s	0.4	0.0	0.0	0.0	6.3	0.0				0.2	0.0	0.6
Cycle Q Clear(g_c), s	0.4	0.0	0.0	0.0	6.3	0.0				0.2	0.0	0.6
Prop In Lane	1.00		0.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	12	4361	0	65	4138	1246				34	0	30
V/C Ratio(X)	0.58	0.23	0.00	0.00	0.31	0.00				0.09	0.00	0.30
Avail Cap(c_a), veh/h	106	4361	0	65	4138	1246				579	0	515
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.98	0.98	0.00	0.00	1.00	1.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	54.1	0.0	0.0	0.0	1.9	1.4				53.0	0.0	53.2
Incr Delay (d2), s/veh	15.1	0.1	0.0	0.0	0.2	0.0				1.1	0.0	5.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	0.0	0.7	0.0				0.1	0.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.2	0.1	0.0	0.0	2.1	1.4				54.1	0.0	58.7
LnGrp LOS	E	A	A	A	A	A				D	A	E
Approach Vol, veh/h		993			1291							12
Approach Delay, s/veh		0.6			2.1							57.5
Approach LOS		A			A							E
Timer - Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		103.3		6.7	5.0	98.3						
Change Period (Y+Rc), s		* 6		4.6	* 4.2	* 6						
Max Green Setting (Gmax), s		* 62		37.0	* 6.8	* 51						
Max Q Clear Time (g_c+I1), s		2.0		2.6	2.4	8.3						
Green Ext Time (p_c), s		18.9		0.0	0.0	21.5						

Intersection Summary

HCM 6th Ctrl Delay	1.8
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
4: Main St & Maxwell Rd

Existing + Project PM
01/12/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↓		↔↔↔	↔↔↔			↔		↔	↓	
Traffic Volume (veh/h)	135	692	8	0	852	35	7	0	0	44	0	227
Future Volume (veh/h)	135	692	8	0	852	35	7	0	0	44	0	227
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.98	1.00		1.00	0.99		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807
Adj Flow Rate, veh/h	157	805	9	0	916	38	12	0	0	85	0	437
Peak Hour Factor	0.86	0.86	0.86	0.93	0.93	0.93	0.58	0.58	0.58	0.52	0.52	0.52
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	301	1985	22	2	2149	89	106	0	0	611	0	484
Arrive On Green	0.09	0.57	0.57	0.00	0.15	0.15	0.33	0.00	0.00	0.33	0.00	0.33
Sat Flow, veh/h	3338	3476	39	1721	4852	201	126	0	0	1362	0	1489
Grp Volume(v), veh/h	157	398	416	0	620	334	12	0	0	85	0	437
Grp Sat Flow(s),veh/h/ln	1669	1716	1798	1721	1644	1765	126	0	0	1362	0	1489
Q Serve(g_s), s	4.9	14.2	14.2	0.0	18.9	18.9	1.4	0.0	0.0	0.0	0.0	30.9
Cycle Q Clear(g_c), s	4.9	14.2	14.2	0.0	18.9	18.9	32.2	0.0	0.0	3.9	0.0	30.9
Prop In Lane	1.00		0.02	1.00		0.11	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	301	980	1027	2	1456	782	106	0	0	611	0	484
V/C Ratio(X)	0.52	0.41	0.41	0.00	0.43	0.43	0.11	0.00	0.00	0.14	0.00	0.90
Avail Cap(c_a), veh/h	358	980	1027	66	1456	782	199	0	0	751	0	637
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	0.97	0.97	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	47.8	13.2	13.2	0.0	34.2	34.3	50.9	0.0	0.0	26.4	0.0	35.5
Incr Delay (d2), s/veh	0.5	1.2	1.2	0.0	0.9	1.7	0.5	0.0	0.0	0.1	0.0	13.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	5.6	5.9	0.0	8.4	9.2	0.3	0.0	0.0	1.6	0.0	12.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.3	14.4	14.3	0.0	35.1	35.9	51.3	0.0	0.0	26.5	0.0	48.9
LnGrp LOS	D	B	B	A	D	D	D	A	A	C	A	D
Approach Vol, veh/h		971			954			12			522	
Approach Delay, s/veh		19.9			35.4			51.3			45.2	
Approach LOS		B			D			D			D	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	69.1		40.9	14.1	55.0		40.9				
Change Period (Y+Rc), s	4.2	* 6.3		* 5.1	* 4.2	* 6.3		5.1				
Max Green Setting (Gmax), s	4.2	* 43		* 47	* 12	* 36		46.9				
Max Q Clear Time (g_c+1), s	10.0	16.2		32.9	6.9	20.9		34.2				
Green Ext Time (p_c), s	0.0	11.9		2.9	0.1	11.5		0.0				

Intersection Summary

HCM 6th Ctrl Delay	31.4
HCM 6th LOS	C

Notes

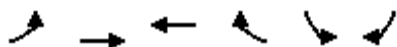
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary

5: Main St & Nirvana Ave

Existing + Project PM

01/12/2023



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖↗	↑↑	↑↑↔		↖↗	↖
Traffic Volume (veh/h)	174	581	605	44	62	275
Future Volume (veh/h)	174	581	605	44	62	275
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.97	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1807	1807	1807	1807	1807	1807
Adj Flow Rate, veh/h	207	692	651	47	0	387
Peak Hour Factor	0.84	0.84	0.93	0.93	0.88	0.88
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	303	2599	2944	211	247	718
Arrive On Green	0.18	1.00	0.63	0.63	0.00	0.14
Sat Flow, veh/h	3338	3523	4848	336	1721	3062
Grp Volume(v), veh/h	207	692	455	243	0	387
Grp Sat Flow(s),veh/h/ln	1669	1716	1644	1733	1721	1531
Q Serve(g_s), s	6.4	0.0	6.6	6.7	0.0	12.2
Cycle Q Clear(g_c), s	6.4	0.0	6.6	6.7	0.0	12.2
Prop In Lane	1.00			0.19	1.00	1.00
Lane Grp Cap(c), veh/h	303	2599	2066	1089	247	718
V/C Ratio(X)	0.68	0.27	0.22	0.22	0.00	0.54
Avail Cap(c_a), veh/h	449	2599	2066	1089	701	1525
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.94	0.94	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	43.5	0.0	8.8	8.8	0.0	36.9
Incr Delay (d2), s/veh	1.0	0.2	0.2	0.5	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.1	2.1	2.3	0.0	10.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	44.5	0.2	9.1	9.3	0.0	37.5
LnGrp LOS	D	A	A	A	A	D
Approach Vol, veh/h		899	698		387	
Approach Delay, s/veh		10.4	9.1		37.5	
Approach LOS		B	A		D	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		90.0		20.0	14.2	75.8
Change Period (Y+Rc), s		* 6.7		* 4.2	* 4.2	* 6.7
Max Green Setting (Gmax), s		* 54		* 45	* 15	* 35
Max Q Clear Time (g_c+I1), s		2.0		14.2	8.4	8.7
Green Ext Time (p_c), s		11.5		1.6	0.2	8.1

Intersection Summary

HCM 6th Ctrl Delay	15.3
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection						
Int Delay, s/veh	3.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	134	0	175	43	0	203
Future Vol, veh/h	134	0	175	43	0	203
Conflicting Peds, #/hr	10	10	0	10	10	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	149	0	194	48	0	226

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	464	238	0	0	252
Stage 1	228	-	-	-	-
Stage 2	236	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13
Critical Hdwy Stg 1	5.43	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227
Pot Cap-1 Maneuver	555	798	-	-	1307
Stage 1	808	-	-	-	-
Stage 2	801	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	544	783	-	-	1295
Mov Cap-2 Maneuver	544	-	-	-	-
Stage 1	800	-	-	-	-
Stage 2	793	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.1	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	544	1295
HCM Lane V/C Ratio	-	-	0.274	-
HCM Control Delay (s)	-	-	14.1	0
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	1.1	0

APPENDIX F

QUEUE CALCULATION SHEETS AND EXCERPTS FROM THE AASHTO GEOMETRIC DESIGN OF HIGHWAYS AND STREET MANUAL AND THE CITY OF CHULA VISTA DESIGN AND CONSTRUCTION STANDARD DRAWINGS 2017 ON SIGHT DISTANCE CALCULATIONS

Intersection: 5: Main St & Nirvana Ave

Movement	EB	EB	EB	EB	WB	WB	WB	SB	SB
Directions Served	L	L	T	T	T	T	TR	LR	R
Maximum Queue (ft)	183	193	105	123	224	198	142	104	150
Average Queue (ft)	84	104	19	29	123	86	46	31	60
95th Queue (ft)	160	173	72	95	204	171	108	86	116
Link Distance (ft)			485	485	1142	1142	1142		1099
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	220	220						80	
Storage Blk Time (%)	0	0						0	7
Queuing Penalty (veh)	0	1						0	3

Queuing and Blocking Report
Existing + Project PM

01/12/2023

Intersection: 5: Main St & Nirvana Ave

Movement	EB	EB	EB	EB	WB	WB	WB	SB	SB
Directions Served	L	L	T	T	T	T	TR	LR	R
Maximum Queue (ft)	120	141	128	144	216	193	148	105	584
Average Queue (ft)	36	64	32	40	139	99	48	90	206
95th Queue (ft)	89	114	90	106	217	184	108	135	471
Link Distance (ft)			486	486	1150	1150	1150		1099
Upstream Blk Time (%)									1
Queuing Penalty (veh)									4
Storage Bay Dist (ft)	220	220						80	
Storage Blk Time (%)								10	40
Queuing Penalty (veh)								14	79

in Table 9-6. The length of the sight triangle leg to the right needed for a left-turn maneuver by a passenger car onto the major road, shown as dimension b in the drawing on the right in Figure 9-17, is based on a time gap of 7.5 s. A sight triangle to the left is also needed for the left-turning vehicle to cross the near lane(s) of the major road on which traffic approaches from the left; the length of the leg of this sight triangle along the major road is shown as dimension b in the drawing to the left in Figure 9-17. This sight triangle to the left is normally provided by Case B2 for the right-turn maneuver (see below). In the rare case where a right-turn maneuver is not permitted onto a two-way street, Case B2 should still be provided so that sight distance is available for crossing the near lane(s) in a left-turn maneuver. In applying Table 9-6, it can usually be assumed that the minor-road vehicle is a passenger car. However, where substantial volumes of heavy vehicles enter the major road, such as from a ramp terminal, the use of tabulated values for single-unit or combination trucks should be considered.

Table 9-6 includes appropriate adjustments to the gap times for the number of lanes on the major road and for the approach grade of the minor road. The adjustment for the grade of the minor-road approach is needed only if the rear wheels of the design vehicle would be on an upgrade that exceeds 3 percent when the vehicle is at the stop line of the minor-road approach.

Table 9-6. Time Gap for Case B1, Left Turn from Stop

Design Vehicle	Time Gap (t_g)(s) at Design Speed of Major Road
Passenger car	7.5
Single-unit truck	9.5
Combination truck	11.5

Note: Time gaps are for a stopped vehicle to turn left onto a two-lane highway with no median and with minor-road approach grades of 3 percent or less. The time gaps are applicable to determining sight distance to the right in left-turn maneuvers. The table values should be adjusted as follows:

For multilane roadways or medians—For left turns onto two-way roadways with more than two lanes, including turn lanes, add 0.5 s for passenger cars or 0.7 s for trucks for each additional lane, from the left, in excess of one, to be crossed by the turning vehicle. Median widths should be converted to an equivalent number of lanes in applying the 0.5 and 0.7 s criteria presented above; for example, an 18-ft [5.5-m] median is equivalent to one and a half lanes, and would require an additional 0.75 s for a passenger to cross and an additional 1.05 s for a truck to cross.

For minor-road approach grades—If the approach grade is an upgrade that exceeds 3 percent, add 0.2 s for each percent grade by which the approach grade exceeds zero percent.

The intersection sight distance along the major road (distance b in Figure 9-17) is determined by:

U.S. Customary	Metric
$ISD = 1.47 V_{\text{major}} t_g$ <p>where:</p> <p>ISD = intersection sight distance (length of the leg of sight triangle along the major road) (ft)</p> <p>V_{major} = design speed of major road (mph)</p> <p>t_g = time gap for minor road vehicle to enter the major road (s)</p>	$ISD = 0.278 V_{\text{major}} t_g$ <p>where:</p> <p>ISD = intersection sight distance (length of the leg of sight triangle along the major road) (m)</p> <p>V_{major} = design speed of major road (km/h)</p> <p>t_g = time gap for minor road vehicle to enter the major road (s)</p>

(9-1)

For example, a passenger car turning left onto a two-lane major road should be provided sight distance equivalent to a time gap of 7.5 s in major-road traffic. If the design speed of the major road is 60 mph [100 km/h], this corresponds to a sight distance of $1.47(60)(7.5) = 661.5$ or 665 ft [$0.278(100)(7.5) = 208.5$ or 210 m], rounded for design.

A passenger car turning left onto a four-lane undivided roadway will need to cross two near lanes, rather than one. This increases the recommended gap in major-road traffic from 7.5 to 8.0 s. The corresponding value of sight distance for this example would be 706 ft [223 m]. If the minor-road approach to such an intersection is located on a 4 percent upgrade, then the time gap selected for intersection sight distance design for left turns should be increased from 8.0 to 8.8 s, equivalent to an increase of 0.2 s for each percent grade.

The design values for intersection sight distance for passenger cars are shown in Table 9-7.

No adjustment of the recommended sight distance values for the major-road grade is generally needed because both the major- and minor-road vehicle will be on the same grade when departing from the intersection. However, if the minor-road design vehicle is a heavy truck and the intersection is located near a sag vertical curve with grades over 3 percent, then an adjustment to extend the recommended sight distance based on the major-road grade should be considered.

Table 9-7. Design Intersection Sight Distance—Case B1, Left Turn from Stop

U.S. Customary				Metric			
Design Speed (mph)	Stopping Sight Distance (ft)	Intersection Sight Distance for Passenger Cars		Design Speed (km/h)	Stopping Sight Distance (m)	Intersection Sight Distance for Passenger Cars	
		Calculated (ft)	Design (ft)			Calculated (m)	Design (m)
15	80	165.4	170	20	20	41.7	45
20	115	220.5	225	30	35	62.6	65
25	155	275.6	280	40	50	83.4	85
30	200	330.8	335	50	65	104.3	105
35	250	385.9	390	60	85	125.1	130
40	305	441.0	445	70	105	146.0	150
45	360	496.1	500	80	130	166.8	170
50	425	551.3	555	90	160	187.7	190
55	495	606.4	610	100	185	208.5	210
60	570	661.5	665	110	220	229.4	230
65	645	716.6	720	120	250	250.2	255
70	730	771.8	775	130	285	271.1	275
75	820	826.9	830				
80	910	882.0	885				

Note: Intersection sight distance shown is for a stopped passenger car to turn left onto a two-lane highway with no median and grades 3 percent or less. For other conditions, the time gap should be adjusted and the sight distance recalculated.

Sight distance design for left turns at intersections on divided roads or streets should consider multiple design vehicles and median width. If the design vehicle used to determine sight distance for an intersection on a divided road or street is larger than a passenger car, then sight distance for left turns should be checked for that selected design vehicle and for a passenger car as well. If the median on a divided road or street is wide enough to store the design vehicle with a clearance to the through lanes of approximately 3 ft [1 m] at both ends of the vehicle, no separate analysis for the departure sight triangle for left turns is needed on the minor-road approach for the near roadway to the left. In most cases, the departure sight triangle for right turns (Case B2) will provide sufficient sight distance for a passenger car to cross the near roadway to reach the median. Possible exceptions are addressed in the discussion of Case B3.

If the design vehicle can be stored in the median with adequate clearance to the through lanes, a departure sight triangle to the right for left turns should be provided for that design vehicle turning left from the median roadway. Where the median is not wide enough to store the design vehicle, a departure sight triangle should be provided for that design vehicle to turn left from the minor-road approach.

The median width should be considered in determining the number of lanes to be crossed. The median width should be converted to equivalent lanes. For example, an 18-ft [5.5-m] median should be considered as one and a half additional lanes to be crossed in applying the multilane roadway adjustment for time gaps in Table 9-6. Furthermore, a departure sight triangle for left turns from the median roadway should be provided for the largest design vehicle that can be stored on the median roadway with adequate clearance to the through lanes.

If the sight distance along the major road shown in Figure 9-17, including any appropriate adjustments, cannot be provided, then consideration should be given to installing regulatory speed signing on the major-road approaches.

For left-turns onto a one-way roadway, time gaps based on Case B2 (see below) can be applied in determining the sight triangle needed for looking at vehicles approaching from the right.

9.5.3.2.2 Case B2—Right Turn from the Minor Road

A departure sight triangle for traffic approaching from the left like that shown in Figure 9-17 should be provided for right turns from the minor road onto the major road. The intersection sight distance for right turns is determined in the same manner as for Case B1, except that the time gaps (t_g) in Table 9-6 should be adjusted. Field observations indicate that, in making right turns, drivers generally accept gaps that are slightly shorter than those accepted in making left turns (21). The time gaps in Table 9-6 can be decreased by 1.0 s for right-turn maneuvers without undue interference with major-road traffic. These adjusted time gaps for the right turn from the minor road are shown in Table 9-8. Design values based on these adjusted time gaps are shown in Table 9-9 for passenger cars. This 1.0-s reduction in the time gap applies only where turns are limited to right turns; where left turns are also permitted, the time gaps for Case B1 from Table 9-5 apply. When the minimum recommended sight distance for a right-turn maneuver cannot be provided, even with the reduction of 1.0 s from the values in Table 9-6, consideration should be given to installing regulatory speed signing or other traffic control devices on the major-road approaches.

Table 9-8. Time Gap for Case B2—Right Turn from Stop

Design Vehicle	Time Gap (t_g)(s) at Design Speed of Major Road
Passenger car	6.5
Single-unit truck	8.5
Combination truck	10.5

Note: Time gaps are for a stopped vehicle to turn right onto or to cross a two-lane roadway with no median and with minor-road approach grades of 3 percent or less. The table values should be adjusted as follows:

For minor-road approach grades—If the approach grade is an upgrade that exceeds 3 percent, add 0.1 s for each percent grade by which the approach grade exceeds zero percent.

Table 9-9. Design Intersection Sight Distance—Case B2, Right Turn from Stop

U.S. Customary				Metric			
Design Speed (mph)	Stopping Sight Distance (ft)	Intersection Sight Distance for Passenger Cars		Design Speed (km/h)	Stopping Sight Distance (m)	Intersection Sight Distance for Passenger Cars	
		Calculated (ft)	Design (ft)			Calculated (m)	Design (m)
15	80	143.3	145	20	20	36.1	40
20	115	191.1	195	30	35	54.2	55
25	155	238.9	240	40	50	72.3	75
30	200	286.7	290	50	65	90.4	95
35	250	334.4	335	60	85	108.4	110
40	305	382.2	385	70	105	126.5	130
45	360	430.0	430	80	130	144.6	145
50	425	477.8	480	90	160	162.6	165
55	495	525.5	530	100	185	180.7	185
60	570	573.3	575	110	220	198.8	200
65	645	621.1	625	120	250	216.8	220
70	730	668.9	670	130	285	234.9	235
75	820	716.6	720				
80	910	764.4	765				

Note: Intersection sight distance shown is for a stopped passenger car to turn right onto or to cross a two-lane roadway with no median and with grades of 3 percent or less. For other conditions, the time gap should be adjusted and the sight distance recalculated.

9.5.3.2.3 Case B3—Crossing Maneuver from the Minor Road

In most cases, the departure sight triangles for left and right turns onto the major road, as described for Cases B1 and B2, will also provide adequate sight distance for minor-road vehicles to cross the major road. However, in the following situations, it is advisable to check the availability of sight distance for crossing maneuvers:

- where left or right turns or both are not permitted from a particular approach and the crossing maneuver is the only legal maneuver;
- where the crossing vehicle would cross the equivalent width of more than six lanes; or
- where substantial volumes of heavy vehicles cross the roadway and steep grades that might slow the vehicle while its back portion is still in the intersection are present on the departure roadway on the far side of the intersection.

The equation for intersection sight distance in Case B1 (see Equation 9-1) is used again for the crossing maneuver except that time gaps (t_g) are the same as those for the Right Turn from Stop maneuver, which presents time gaps and appropriate adjustment factors to determine the intersection sight distance along the major road to accommodate crossing maneuvers. At divid-



Energy Way

Bradford Metals
Hardware store

Energy Way

AAA Foreign
Auto Recycling

LKO Pick Your Part
Chula Vista (West)

Energy Way

Energy Way

Ecology Auto Wrecking

F J Willert Contracting

Mc Mahon Steel

Nirvana Ave 423

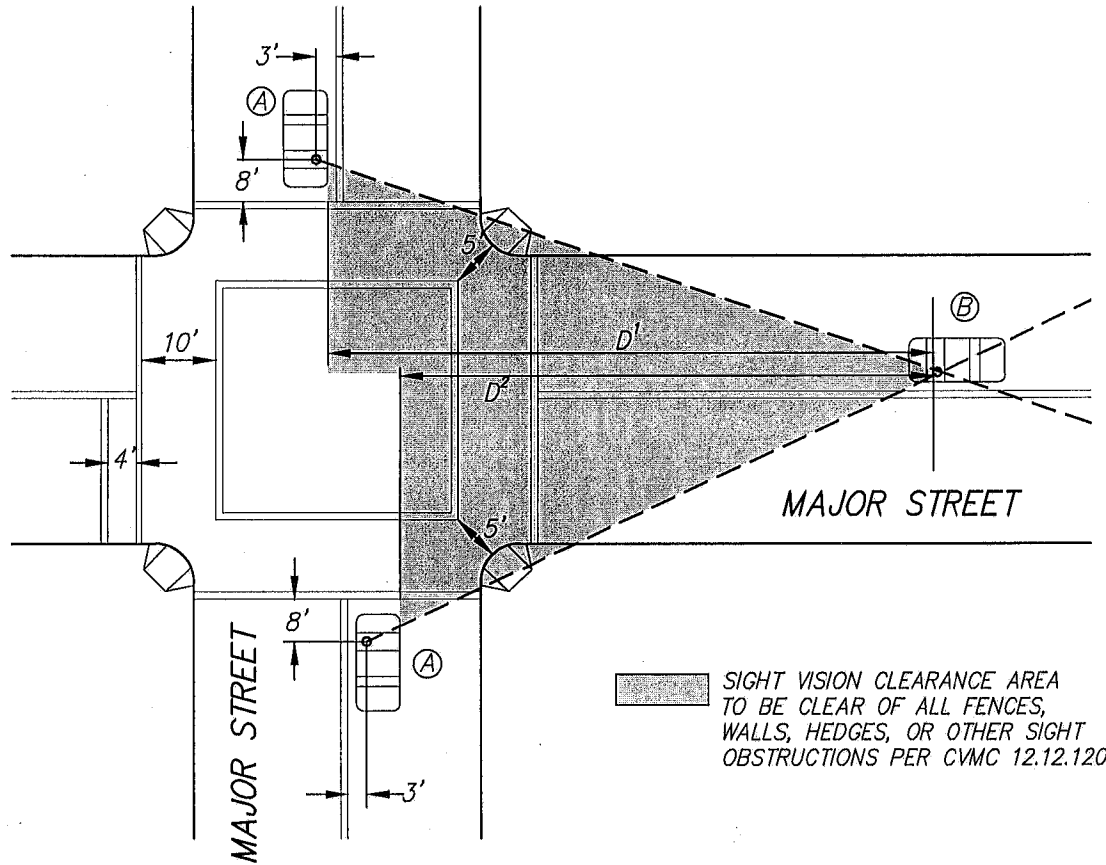
386
Nirvana Ave

Bradford Powder
Coating San Diego

Nirvana Ave

ASAP Towing

Main St




REQUIRED SIGHT DISTANCE *		
DESIGN OR 85TH PERCENTILE SPEED (IN M.P.H.)	CORNER SIGHT DISTANCE (D ¹ & D ²) FROM LOCATION (A)	STOPPING SIGHT DISTANCE (D ¹ & D ²) FROM LOCATION (B)
25	280	155
30	335	200
35	390	250
40	445	305
45	500	360
50	555	425
55	610	495
60	665	570
65	720	645
70	775	730

* SIGHT DISTANCE FOR LEVEL GRADE (3% OR LESS)

(SEE SHEET 2 FOR ADDITIONAL NOTES)

SHEET 1 OF 3

REVISION	BY	APPROVED	DATE	CITY OF CHULA VISTA ENGINEERING & CAPITAL PROJECTS STANDARD DRAWING	 WILLIAM S. VALLE CITY ENGINEER
ORIGINAL	CVM	C. SWANSON	11/02		
REVISION	DPH	W. VALLE	11/17		
				SIGHT DISTANCE REQUIREMENTS	11/21/2017
					RWY-05

CORNER SIGHT DISTANCE IS DEFINED AS THE SIGHT DISTANCE NEEDED TO ALLOW 7 1/2 SECONDS OF REACTION TIME FOR THE DRIVER OF A VEHICLE STOPPED AT POINT "A" TO PROCEED THRU THE INTERSECTION WHILE THE APPROACHING VEHICLE (POINT "B") TRAVELS AT THE ASSUMED DESIGN SPEED, OR THE 85 PERCENTILE SPEED (WHICHEVER IS HIGHER), OF THE MAJOR ROADWAY.

CORNER SIGHT DISTANCE SHALL (1) BE MEASURED ALONG THE PATH OF THE APPROACHING VEHICLE TO A PROJECTED POINT OF COLLISION BETWEEN VEHICLES, ASSUMING THAT BOTH VEHICLES PROCEED STRAIGHT AHEAD AND (2) SHALL COMPLY WITH THE TABLE PROVIDED ON THE PREVIOUS PAGE, BASED ON THE MINIMUM DESIGN SPEED OF THE ROADWAY, OR THE 85th PERCENTILE SPEED, WHICHEVER IS HIGHER. THIS SIGHT DISTANCE IS MEASURED FROM A 3.5 FOOT EYE HEIGHT ON THE MINOR ROAD TO A 4.25 FOOT OBJECT HEIGHT ON THE MAJOR ROAD.

STOPPING SIGHT DISTANCE IS DEFINED AS THE DISTANCE REQUIRED BY THE DRIVER AT POINT "B", TRAVELING AT A GIVEN SPEED, TO BRING THEIR VEHICLE TO A STOP AFTER AN OBJECT ON THE ROAD BECOMES VISIBLE. STOPPING SIGHT DISTANCE IS MEASURED FROM A 3.5 FOOT EYE HEIGHT ON THE MAJOR ROAD TO AN OBJECT 0.5 FEET HIGH ON THE MINOR ROAD.

ADDITIONAL SIGHT DISTANCE NOTES:

- 1) THE SIGHT DISTANCE REQUIREMENTS SHALL BE INCREASED BY 20% ON SUSTAINED DOWNGRADES STEEPER THAN 3% AND LONGER THAN 1 MILE.
- 2) IN CASES OF RIGHT-OF-WAY CONFLICTS, WHERE EXTENSIVE EXCAVATION IS REQUIRED OR FOR THE PRESERVATION OF WETLANDS, HISTORIC OR ARCHAEOLOGICAL SITES, A LESSER VALUE FOR CORNER SIGHT DISTANCE MAYBE USED. BUT THE MINIMUM VALUE SHALL BE THE STOPPING SIGHT DISTANCE GIVEN IN THE PREVIOUS PAGE, MEASURED FROM A 3.5 FOOT EYE HEIGHT ON THE MINOR ROAD TO A 4.5 FOOT EYE HEIGHT ON THE MAJOR ROAD. USE OF THIS MINIMUM SIGHT DISTANCE MUST BE SPECIFICALLY APPROVED BY THE CITY ENGINEER OR THEIR DESIGNEE.
- 3) AT SIGNALIZED INTERSECTIONS, THE STOPPING SIGHT DISTANCE REQUIREMENTS SHALL BE USED.

STRIPING NOTES:


CROSSWALK LIMITS: UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER, THE FRONT OF THE CROSSWALK SHALL BE ESTABLISHED BETWEEN POINTS 5 FEET OUT FROM THE FACE OF CURB ON RADIAL LINES ESTABLISHED ALONG THE PROJECTED CENTERLINES OF THE CURB RETURNS. THE BACK OF THE CROSSWALK SHALL BE ESTABLISHED 11 FEET BACK FROM THE FRONT LINE OF THE CROSSWALK MEASURED ALONG A LINE PERPENDICULAR TO THE FRONT LINE.

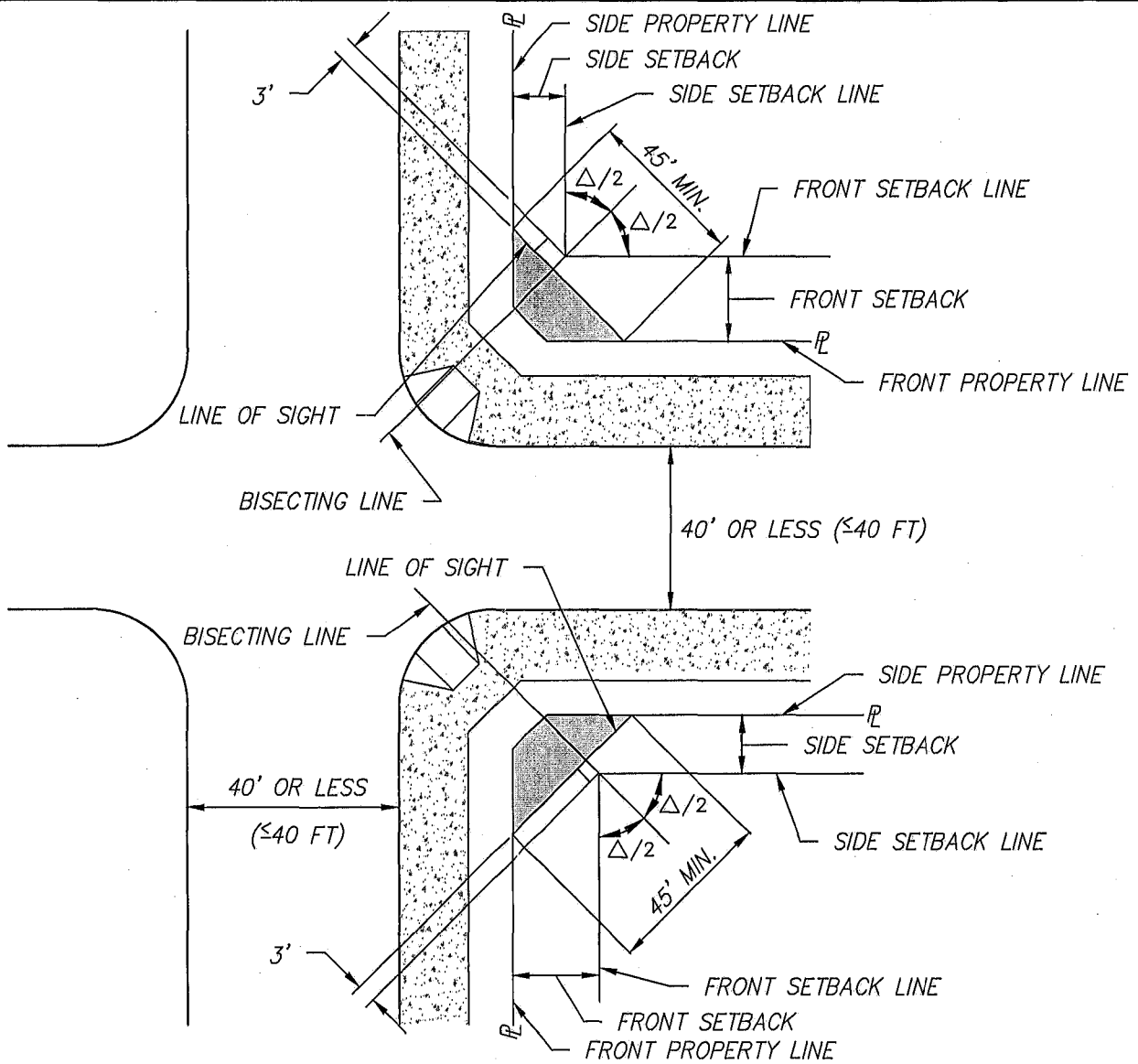
STOPPING LIMIT LINE: AT SIGNALIZED INTERSECTIONS, WHERE SCHOOL CROSSING ARE ESTABLISHED, AND/OR WHERE STRIPING PLANS INDICATE, A STOPPING LIMIT LINE SHALL BE ESTABLISHED 4 FEET BACK FROM THE CROSSWALK.

THE CRITICAL LINE OF SIGHT SHALL BE ESTABLISHED BETWEEN POINT "A" ON THE MINOR STREET AND POINT "B" ON THE MAJOR STREET. POINT "A" SHALL BE THAT POINT MEASURED 8 FEET BACK FROM EITHER THE BACK OF THE STOPPING LIMIT LINE, IF ONE EXISTS, OR THE BACK LINE OF THE CROSSWALK AND 3 FEET FROM THE LANE LINE STRIPE OR THE PAINTED CENTER LINE OF THE MINOR STREET. POINT "B" SHALL BE THAT POINT, BEING THE END POINT OF EITHER LINE D1 OR D2, MEASURED THE DISTANCE GIVEN IN THE REQUIRED SIGHT DISTANCE TABLE AND 3 FEET FROM THE LANE LINE STRIPE OR THE PAINTED CENTER LINE OF THE MAJOR STREET. THE CRITICAL LINE OF SIGHT IS THAT LINE WHICH OFFERS THE MOST RESTRICTIVE POINT OF VISION.

SIGHT VISION CLEARANCE AREA NOTES:

PER CHULA VISTA MUNICIPAL CODE SECTION 12.12.120, ALL FENCES WALLS, HEDGES, OR OTHER OBSTRUCTIONS TO VISION THAT ARE LOCATED WITHIN SIGHT VISION TRIANGLE SHALL BE LIMITED TO A MAXIMUM HEIGHT OF 3 FEET, MEASURED FROM EVERY POINT ALONG THE OUTER EDGE OF THE PAVED SURFACE OF THE ROADWAY.


REVISION	BY	APPROVED	DATE	CITY OF CHULA VISTA ENGINEERING & CAPITAL PROJECTS STANDARD DRAWING	
ORIGINAL	CVM	C. SWANSON	11/02		
REVISION	DPH	W. VALLE	11/17		
				SIGHT DISTANCE REQUIREMENTS	WILLIAM S. VALLE 11/21/2017 CITY ENGINEER
				ADDITIONAL NOTES	RWY-05



 SIGHT VISION CLEARANCE AREA

NOTES:

- 1) FRONT AND SIDE SETBACKS ARE ESTABLISHED BY THE PLANNING AND BUILDING DEPARTMENT, AND SHALL SERVE AS THE BASIS FOR DETERMINING SIGHT-LINE CALCULATIONS.
- 2) THE LINE OF SIGHT IS ESTABLISHED AT A CORNER PROPERTY AS FOLLOWS: FROM A POINT ALONG A LINE THAT BISECTS AN INTERIOR ANGLE, SAID ANGLE IS BEING FORMED BY INTERSECTING THE FRONT AND SIDE SETBACK LINES, THE LINE OF SIGHT IS ESTABLISHED PERPENDICULAR TO SAID BISECTING LINE AND 3 FEET FROM THE ABOVE REFERENCED POINT. THE LINE OF SIGHT SHALL EXTEND TO INTERSECT THE FRONT AND SIDE PROPERTY LINES. HOWEVER, THE LENGTH OF THIS LINE SHALL BE A MINIMUM OF 45 FEET, MEASURED FROM A POINT OF INTERSECTION WITH THE SIDE PROPERTY LINE TO A POINT OF INTERSECTION WITH THE FRONT PROPERTY LINE. THE SIGHT DISTANCE REQUIREMENTS SHALL FURTHER COMPLY WITH THE PROVISIONS OF SECTION 12.12.120 OF THE MUNICIPAL CODE.
- 3) PER CHULA VISTA MUNICIPAL CODE SECTION 12.12.120, ALL FENCES, WALLS, HEDGES OR OTHER OBSTRUCTIONS TO VISION, THAT ARE LOCATED WITHIN THE SIGHT VISION TRIANGLE, SHALL BE LIMITED TO A MAXIMUM HEIGHT OF 3.0 FEET, MEASURED FROM EVERY POINT ALONG THE OUTER EDGE OF THE PAVED SURFACE OF THE ROADWAY.

REVISION	BY	APPROVED	DATE	CITY OF CHULA VISTA ENGINEERING & CAPITAL PROJECTS STANDARD DRAWING	 WILLIAM S. VALLE CITY ENGINEER
ORIGINAL	CVM	C. SWANSON	11/02		
REVISION	DPH	W. VALLE	11/17		
				SIGHT DISTANCE REQUIREMENTS FOR STREETS 40' OR LESS	11/21/2017 RWY-05



APPENDIX G
BUS ROUTE MAP AND SCHEDULE

ONE-WAY FARES / Tarifas Sencillas

Exact fare, please / Favor de pagar la cantidad exacta	
Adult / Adulto	\$2.50
Senior/Disabled/Medicare* Personas Mayores/con Discapacidades/Medicare*	\$1.25
Youth (ages 6-18)* Jóvenes (edades 6-18)*	\$2.50

DAY PASS (Regional) / Pase diario (Regional)

Adult / Adulto	\$6.00
Senior/Disabled/Medicare* Personas Mayores/con Discapacidades/Medicare*	\$3.00
Youth (ages 6-18)* Jóvenes (edades 6-18)*	\$3.00

*Proof of eligibility required. Senior Eligibility: Age 65+ or born on or before September 1, 1959.
*Se requiere verificación de elegibilidad. Elegibilidad para Personas Mayores: Edad 65+ o nacido en o antes del 1 de septiembre, 1959.

COMPASS CARDS / Tarjeta Compass
There is a \$2 charge for Compass Cards, which can be reloaded for future use.
Hay un costo de \$2 por la tarjeta Compass Card, la cual puede ser recargada para usos futuros.

COMPASS CLOUD
Download the free Compass Cloud app on your Apple or Android phone.
Descargue la aplicación gratis Compass Cloud en su teléfono Apple o Android.

Visit sdmts.com/fares for more info. Visite sdmts.com/fares para más información.

DIRECTORY / Directorio

MTS Information & Trip Planning MTS Información y planeo de viaje	511 or/ó (619) 233-3004
TTY/TDD (teletype for hearing impaired) Teletipo para sordos	(619) 234-5005 or/ó (888) 722-4889
InfoExpress (24-hour info via Touch-Tone phone) Información las 24 horas (via teléfono de teclas)	(619) 685-4900
Customer Service / Suggestions Servicio al cliente / Sugerencias	(619) 557-4555
MTS Security MTS Seguridad	(619) 595-4960
Lost & Found Objetos extraviados	(619) 557-4555
Transit Store	(619) 234-1060 12th & Imperial Transit Center M-F 8am-5pm

For MTS online trip planning
Planificación de viajes por Internet **sdmts.com**

For more information on riding MTS services, pick up a Rider's Guide on a bus or at the Transit Store, or visit sdmts.com.
Para obtener más información sobre el uso de los servicios de MTS, recoja un 'Rider's Guide' en un autobús o en la Transit Store, o visita a sdmts.com.

Thank you for riding MTS! ¡Gracias por viajar con MTS!



**E Street Transit Center –
Palomar St. Transit Center**

via Naples St. / Sharp Medical Center / Orange Av.

DESTINATIONS

- Chula Vista Library
- Civic Center
- Memorial Park
- Sharp CV Medical Center
- South County Regional Center
- Veterans Home



TROLLEY CONNECTIONS

- E St.
- Palomar St.



09/19

sdmts.com

Route Alerts, Updated Schedules,
Connections & More



Route 704 – Monday through Friday / Lunes a viernes

E St. Transit Center ➡ Sharp Medical Center ➡ Palomar St. Transit Center

(A) E St. Transit Center DEPART	(B) 3rd Av. & J St.	(C) Naples St. & Hilltop Dr.	(D) Sharp Chula Vista Medical Center	(E) Melrose Av. & Main St.	(F) Orange Av. & 3rd Av.	(G) Palomar St. Transit Center ARRIVE
—	—	—	—	5:29a	5:38a	5:45a
6:03a	6:14a	6:21a	6:02a	6:12	6:21	6:28
6:33	6:45	6:53	6:33	6:43	6:52	6:59
7:03	7:15	7:23	7:06	7:17	7:27	7:34
7:35	7:47	7:55	7:36	7:47	7:57	8:04
8:05	8:17	8:25	8:08	8:19	8:29	8:36
8:35	8:47	8:55	8:37	8:47	8:56	9:04
9:05	9:17	9:25	9:07	9:17	9:26	9:34
9:49	10:01	10:09	9:37	9:47	9:56	10:04
10:19	10:31	10:39	10:21	10:31	10:40	10:48
10:49	11:01	11:09	10:51	11:01	11:10	11:18
11:17	11:29	11:38	11:21	11:31	11:40	11:48
11:47	11:59	12:08p	11:50	12:01p	12:10p	12:18p
12:17p	12:29p	12:38	12:20p	12:31	12:40	12:48
12:47	12:59	1:08	1:01	1:10	1:19	1:28
1:13	1:25	1:35	1:31	1:40	1:49	1:58
1:43	1:55	2:05	1:48	1:59	2:08	2:16
2:13	2:25	2:35	2:18	2:29	2:38	2:46
2:43	2:55	3:05	2:49	3:00	3:10	3:18
3:13	3:25	3:35	3:19	3:30	3:40	3:48
3:43	3:55	4:05	3:49	4:00	4:10	4:18
4:13	4:25	4:35	4:19	4:30	4:40	4:48
4:43	4:55	5:05	4:49	5:00	5:10	5:18
5:13	5:25	5:35	5:19	5:30	5:40	5:48
5:43	5:55	6:04	5:47	5:58	6:07	6:15
6:27	6:38	6:47	6:17	6:28	6:37	6:45
7:20	7:30	7:38	6:59	7:09	7:18	7:26
8:20	8:30	8:38	7:49	7:59	8:08	8:15
			8:49	8:59	9:08	9:15

Palomar St. Transit Center ➡ Sharp Medical Center ➡ E St. Transit Center

(G) Palomar St. Transit Center DEPART	(F) Orange Av. & 3rd Av.	(E) Melrose Av. & Main St.	(D) Sharp Chula Vista Medical Center	(C) Naples St. & Hilltop Dr.	(B) 3rd Av. & J St.	(A) E St. Transit Center ARRIVE
—	—	—	5:22a	5:34a	5:41a	5:51a
5:28a	5:33a	5:41a	5:52	6:04	6:11	6:21
5:58	6:03	6:11	6:22	6:34	6:41	6:51
6:28	6:33	6:41	6:53	7:06	7:14	7:25
6:58	7:03	7:11	7:23	7:36	7:44	7:55
7:28	7:33	7:41	7:53	8:06	8:14	8:25
7:58	8:03	8:11	8:23	8:36	8:44	8:55
8:28	8:33	8:41	8:53	9:06	9:14	9:25
9:03	9:09	9:18	9:30	9:43	9:51	10:03
9:33	9:39	9:48	10:00	10:13	10:21	10:33
10:03	10:09	10:18	10:30	10:43	10:51	11:03
10:33	10:39	10:48	11:00	11:13	11:21	11:33
11:03	11:09	11:18	11:30	11:43	11:51	12:03p
11:33	11:39	11:48	12:00p	12:13p	12:21p	12:33
12:03p	12:09p	12:18p	12:30	12:43	12:51	1:03
12:33	12:39	12:48	1:00	1:13	1:21	1:33
1:03	1:09	1:18	1:30	1:43	1:51	2:03
1:33	1:39	1:48	2:00	2:13	2:21	2:33
2:03	2:09	2:18	2:30	2:43	2:51	3:03
2:33	2:39	2:48	3:00	3:13	3:21	3:33
3:03	3:09	3:18	3:30	3:43	3:51	4:03
3:33	3:39	3:48	4:00	4:13	4:21	4:33
4:03	4:09	4:18	4:30	4:43	4:51	5:03
4:33	4:39	4:48	5:00	5:13	5:21	5:33
5:03	5:09	5:18	5:30	5:43	5:51	6:03
5:33	5:39	5:48	6:00	6:13	6:21	6:33
6:03	6:09	6:18	6:30	6:43	6:51	7:03
6:33	6:39	6:48	7:00	7:13	7:21	7:33
7:03	7:09	7:18	7:30	7:43	7:51	8:03
8:00	8:05	8:14	8:25	8:36	8:42	8:53
9:00	9:05	9:14	9:25	9:36	9:42	9:53

Route 704 – Saturday / sábado

E St. Transit Center ➔ Sharp Medical Center ➔ Palomar St. Transit Center

(A)	(B)	(C)	(D)	(E)	(F)	(G)
E St. Transit Center DEPART	3rd Av. & J St.	Naples St. & Hilltop Dr.	Sharp Chula Vista Medical Center	Melrose Av. & Main St.	Orange Av. & 3rd Av.	Palomar St. Transit Center ARRIVE
6:26a	6:36a	6:43a	6:54a	6:03a	6:11a	6:18a
7:26	7:36	7:43	7:54	7:03	7:11	7:18
8:23	8:34	8:42	8:53	8:03	8:11	8:18
9:23	9:34	9:42	9:53	9:02	9:10	9:17
10:21	10:32	10:40	10:52	10:02	10:10	10:17
11:19	11:30	11:39	11:51	11:01	11:09	11:17
12:19p	12:30p	12:39p	12:51p	12:00p	12:09p	12:17p
1:19	1:30	1:39	1:51	1:00	1:09	1:17
2:19	2:30	2:39	2:51	2:00	2:09	2:17
3:20	3:31	3:40	3:52	3:00	3:09	3:17
4:20	4:31	4:40	4:52	4:01	4:10	4:18
5:21	5:32	5:40	5:52	5:01	5:10	5:18
6:23	6:34	6:42	6:53	6:01	6:09	6:17
7:23	7:34	7:42	7:53	7:02	7:10	7:17
8:25	8:35	8:42	8:53	8:02	8:10	8:17
				9:02	9:10	9:17

Palomar St. Transit Center ➔ Sharp Medical Center ➔ E St. Transit Center

(G)	(F)	(E)	(D)	(C)	(B)	(A)
Palomar St. Transit Center DEPART	Orange Av. & 3rd Av.	Melrose Av. & Main St.	Sharp Chula Vista Medical Center	Naples St. & Hilltop Dr.	3rd Av. & J St.	E St. Transit Center ARRIVE
6:28a	6:32a	6:40a	6:51	6:03a	6:10a	6:20a
7:29	7:33	7:41	7:52	7:03	7:10	7:20
8:29	8:34	8:42	8:53	8:04	8:11	8:21
9:29	9:34	9:42	9:53	9:05	9:12	9:23
10:29	10:34	10:42	10:53	10:05	10:12	10:24
11:29	11:34	11:42	11:53	11:05	11:12	11:24
12:28p	12:34p	12:42p	12:53p	12:05p	12:13p	12:25p
1:28	1:34	1:42	1:53	1:05	1:13	1:25
2:28	2:34	2:42	2:53	2:05	2:13	2:25
3:28	3:34	3:42	3:53	3:05	3:13	3:25
4:29	4:35	4:43	4:54	4:05	4:13	4:25
5:29	5:35	5:43	5:54	5:06	5:13	5:24
6:29	6:34	6:42	6:52	6:06	6:13	6:24
7:29	7:34	7:42	7:52	7:04	7:11	7:22
8:29	8:34	8:42	8:52	8:03	8:09	8:19
				9:03	9:09	9:19

Route 704 – Sunday / domingo

Sharp Medical Center ➔ Palomar St. Transit Center

(A)	(B)	(C)	(D)	(E)	(F)	(G)
E St. Transit Center DEPART	3rd Av. & J St.	Naples St. & Hilltop Dr.	Sharp Chula Vista Medical Center	Melrose Av. & Main St.	Orange Av. & 3rd Av.	Palomar St. Transit Center ARRIVE
—	—	—	7:22a	7:31a	7:39a	7:46a
—	—	—	8:22	8:31	8:39	8:46
—	—	—	9:22	9:31	9:39	9:46
—	—	—	10:21	10:30	10:38	10:46
—	—	—	11:20	11:29	11:38	11:46
—	—	—	12:20p	12:29p	12:38p	12:46p
—	—	—	1:20	1:29	1:38	1:46
—	—	—	2:20	2:29	2:38	2:46
—	—	—	3:20	3:29	3:38	3:46
—	—	—	4:20	4:29	4:38	4:46
—	—	—	5:21	5:30	5:38	5:46
—	—	—	6:22	6:31	6:39	6:46

Palomar St. Transit Center ➔ Sharp Medical Center

(G)	(F)	(E)	(D)	(C)	(B)	(A)
Palomar St. Transit Center DEPART	Orange Av. & 3rd Av.	Melrose Av. & Main St.	Sharp Chula Vista Medical Center	Naples St. & Hilltop Dr.	3rd Av. & J St.	E St. Transit Center ARRIVE
7:30a	7:34a	7:42a	7:53a	—	—	—
8:30	8:35	8:43	8:54	—	—	—
9:30	9:35	9:43	9:54	—	—	—
10:30	10:36	10:44	10:55	—	—	—
11:30	11:36	11:44	11:55	—	—	—
12:30p	12:36p	12:44p	12:55p	—	—	—
1:30	1:36	1:44	1:55	—	—	—
2:30	2:36	2:44	2:55	—	—	—
3:30	3:36	3:44	3:55	—	—	—
4:30	4:36	4:44	4:55	—	—	—
5:30	5:36	5:44	5:55	—	—	—
6:30	6:35	6:43	6:54	—	—	—

A Saturday or Sunday schedule will be operated on the following holidays and observed holidays
Se operará con horario de sábado o domingo durante los siguientes días festivos y feriados observados

>>> New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving, Christmas

